

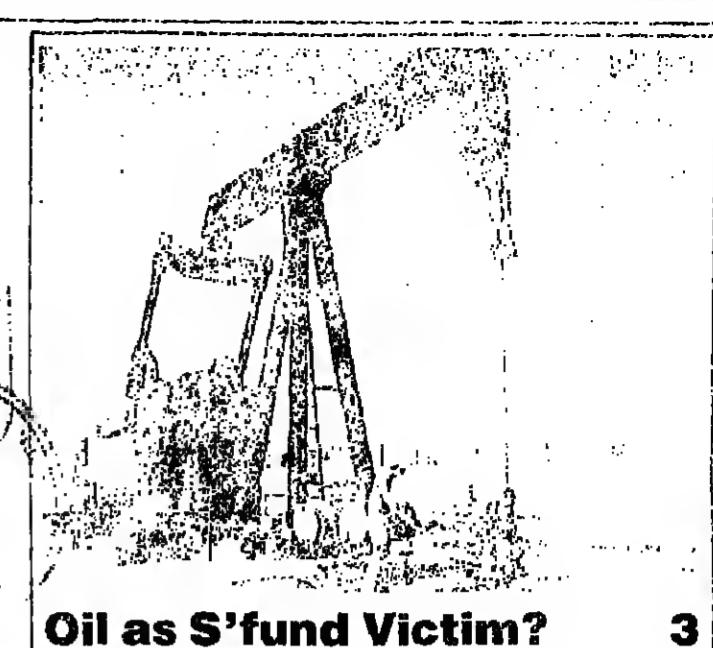
Chemical Marketing

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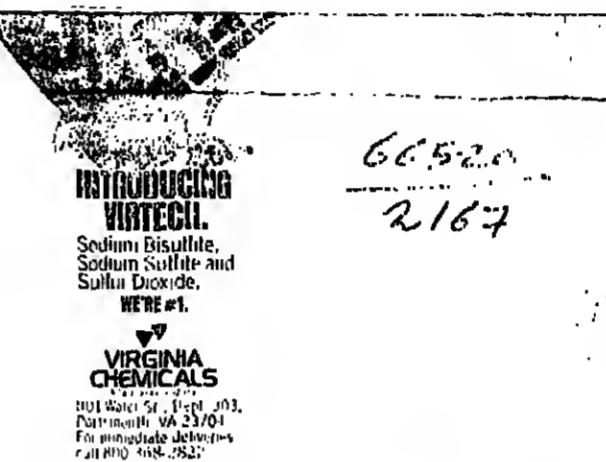
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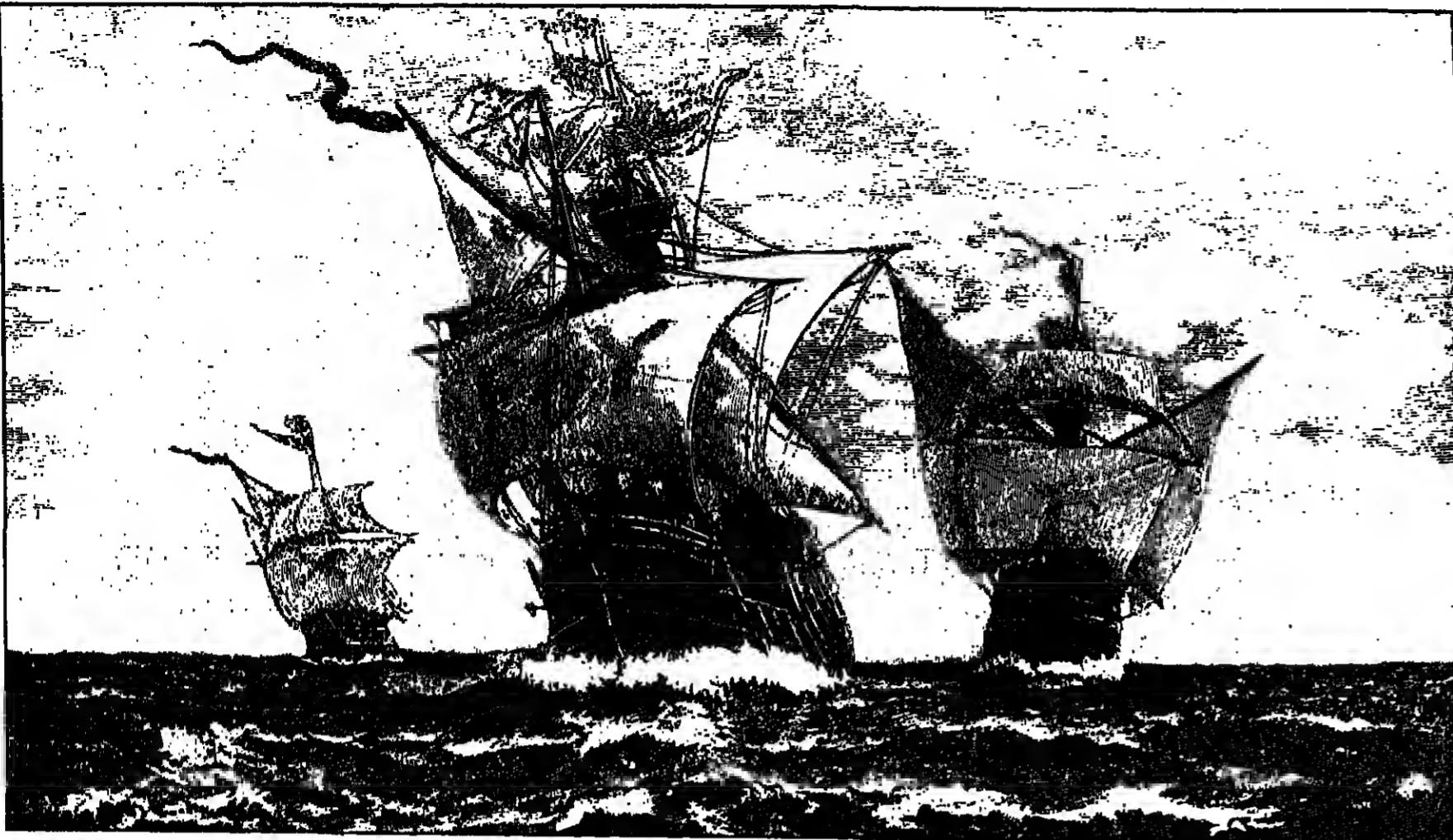
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Trade Zone for Mideast Chemicals?

The European Community should start thinking about setting up a free trade zone between the EC and the Arabian Gulf States. Vicomte Etienne Davignon proposed last week in an address at the twentieth annual meeting of the European Petrochemical Association in Monaco.

The former member of the EC Commission, now a director of Societe Generale de Belgique, thinks that this is the proper moment to start negotiations because the flow of imports has begun.

The Common Market now exports about \$18 billion a year of assorted goods into the Middle East, while Saudi Arabia alone in 1985 moved some 1 million metric tons of key petrochemicals, mostly low- and high-density polyethylenes and methanol, into the European market.

What such a political and economic agreement will

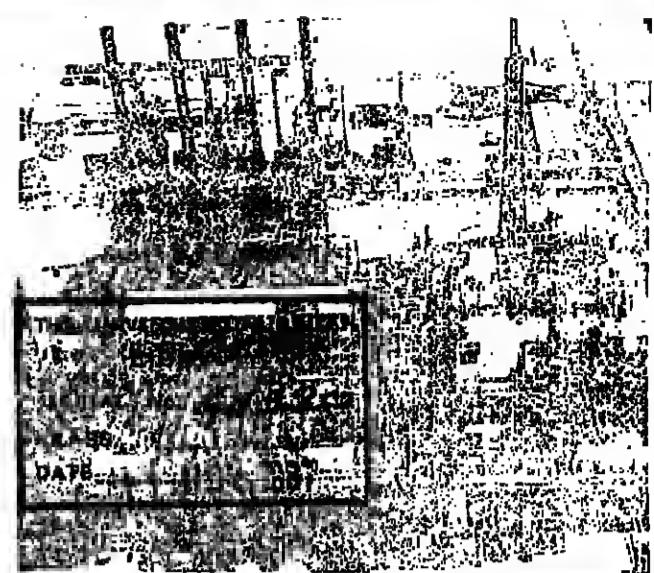
give the Europeans, Vicomte Davignon pointed out, is a partner in consultation, but no one can guarantee the results.

At a press conference following his formal presentation, he conceded that the Arab countries might be tempted to enlarge their present petrochemical capacities if such a free trade zone were established in the EC.

However, he said that such a pact would establish an organized relationship between the EC and the Gulf States, that the percentage of trade going both ways

Continued on Page 18

MIDDLE EAST CHEMICALS: Arab countries might be tempted to raise petrochemical capacity if Davignon plan were adopted. Positive result could be stabilization of trading relationships.



VOLUME 230
Number 14

Chemical Marketing Reporter

OCTOBER 6, 1986

Superfund Tax Passes But Bill May Be Vetoed

After endorsing the final \$8.5 billion superfund financing package agreed in Thursday by congressional negotiators, the chemical industry called on manufacturers to quickly approve the plan and urged President Reagan to sign the landmark legislation into law.

"We reviewed the evidence and decided that just wasn't correct," NLRB regional director Frank Malon said in August, after dismissing the company's charges against the union. (CMR 8/11/86, pg. 3).

Mr. Story said last week that the corporate campaign is "still a very serious concern to us," adding that it "takes a certain amount of effort to offset it."

According to Mr. Story, BASF's chief negotiator at Geismar, the company last met with union representatives on September 26 for approximately 4 hours. He said discussions centered mostly on a review of each side's position. "We were not able to make any progress," he said.

The company's "bottom line" offer provides for an 8 percent wage increase over the life of a 38-month contract. Each worker would receive a "sign-up bonus" of up to \$750, with salary increases in the second and third years of the contract.

The union has offered to take a \$2-per-hour pay cut, but opposes a company effort to replace 110 union mechanics with outside contract workers. Mechanics account for about 30 percent of all OCAW workers at the Geismar plant.

Mr. Story said the company would save more by using contract mechanics than it would by accepting the \$2 per hour pay cut. Other issues in the dispute include health-care benefits and seniority.

The five-year reauthorization plan would finance the cleanup programs with a \$1.4 billion tax on chemical feedstocks, a \$2.75 billion tax on the production of crude oil, \$2.5 billion from a new broad-based corporate tax, \$1.25 billion from general taxpayer revenues, \$300 million from interest on trust fund monies, and another \$300 million from cost recoveries from private responsible parties.

A new \$500 million program to clean up leaking underground storage tanks will be paid for by a one-cent per gallon motor fuel tax imposed at the pump.

The agreement is expected to win overwhelming approval in the full House and Senate this week before going to the White House where the measure faces a veto threat because of the Administration's opposition to some elements of the financing package, including the broad-based tax on manufacturers.

"On balance, the tax conferees have developed an acceptable compromise that will allow Environmental Protection Agency to resume full-scale cleanup activities," says a spokesman for Chemical Manufacturers Association.

He says the industry is pleased that the conferees "recognized the decidedly anti-competitive effects" of feedstock taxes and agreed to essentially freeze the tax on building block chemicals at \$1.4 billion over the next five years.

Petrochemical companies have contributed \$1.2 billion to the original \$1.6 billion program since 1980. Conference sources say the petrochemical industry persuasively argued that higher superfund taxes would

make it uncompetitive with foreign manufacturers.

At the urging of the industry's supporters in the Senate, the House agreed to accept a \$2.5 billion broad-based tax on manufacturers with earnings of more than \$2 million per year. A superfund tax of \$25 per \$10,000 would be imposed on a corporate taxpayer's "alternative minimum taxable income" as computed under the tax reform bill.

Rep. Thomas Downey (D-N.Y.) sponsor of the House-passed tax package called the alternative minimum tax an "important substantive change" in the Senate position because it is a levy on corporate profits. The Senate-passed bill contained a manufacturers' excise tax that opponents labeled a "value-added tax."

In return for the broad-based tax, Senate



OIL PRODUCTION: Tax on oil would generate much new revenue for expanded superfund tax.

Toxic Chemical Haulers Must Pass Special Test

Congress approved legislation last week establishing nationwide licensing standards for truck drivers and special requirements for drivers hauling hazardous materials. The bill by Sen. John Danforth (R-Mo.) and Rep. James Howard (D-N.J.) requires the Department of Transportation to issue regulations imposing minimum Federal standards for licensing operators of large commercial vehicles, such as tank trucks, in place of the current system of state-by-state licensing. Under the legislation, states would still issue licenses for truck drivers, but must adopt the Federal standards by 1992 or face losing up to 10 percent of their Federal highway money.

Critics of the current system say it allows truck drivers to obtain more than one license, often as a tactic to hide violations. The American Association of Motor Vehicles estimates as many as 30 percent of the nation's truck drivers have multiple licenses.

In addition to the minimum standards for all drivers, those handling hazardous materials would be required to pass a written test demonstrating their knowledge of hazardous materials regulations, properties of hazardous materials and emergency response procedures.

Tank truck operators would also have to take road tests to demonstrate their ability to handle the vehicle and operate safety equipment.

The special requirements would cover both interstate and intrastate transport of significant quantities of hazardous materials, an expansive list of substances defined by DOT.

A study by the Congressional Research Service, citing DOT statistics, indicates that more than 80 percent of truck accidents and spills involve human error on the part of drivers or other workers such as loaders.

Congress is expected to make more comprehensive changes in hazardous material transportation law next year.

Amoco Going South With 'Torlon' Plant

Amoco Performance Products, Inc. will move manufacturing operations for its "Torlon" high-performance thermoplastic from Joliet, Ill., to Greenville, S.C., with startup scheduled for mid-1987.

Amoco completed the acquisition of Union Carbide Corporation's engineering polymers and advanced composites businesses, including the Greenville composites operation and a Marietta, Ohio engineering polymers plant.

Amoco would own 65 percent of the venture and Kollmorgen 35 percent, according to the companies. The partners would transfer several of their current developing materials technologies to the joint venture, including Akzo's proprietary high-temperature polyimide flexiblmetal-clad substrates and Kollmorgen's gallium arsenide wafer material and processing material technologies.

In connection with the electronic materials venture, Akzo and Kollmorgen will also establish partnership in the field of electric interconnections. Kollmorgen would transfer the businesses of its multiwire, PCK technology and additive products divisions and related industrial property rights as its contribution to the partnership, while Akzo would make a cash investment. Kollmorgen would own 85 percent of this joint venture, and Akzo 35 percent.

"Torlon" has been manufactured at Joliet and the finished resin shipped directly to customers or further processed at the company's fabrication facilities in Atlanta, Ga.

A spokesman says the consolidation was "just a matter of time" and adds that "products and processes at Greenville are compatible with the 'Torlon' process."

ICI Is Expanding Polyether Sulfone

ICI Americas, Inc.'s advanced materials subsidiary will build a new 11-million-pound-per-year "Victrex" polyether sulfone plant at Fayetteville, N.C.

The development follows closely ICI's decision to build a world-scale polyketone plant in the U.K. and comes soon after doubling PES capacity there in early 1985.

ICI says the decision to build at its existing polyester resin site in Fayetteville is recognition of the US as the largest single market for high-performance engineering thermoplastics.

The company estimates the world market for these high-temperature resins is currently about 38 million pounds per year and is expected to nearly double by 1990.

Construction on the plant will begin immediately and when completed by mid-1988, will make the advanced material unit one of the world's largest producers of high-performance aromatic thermoplastics, and the only producer with manufacturing plants in the US and Europe.

Air Products Gets Terpolymer License

Air Products & Chemicals, Inc., and Wacker-Chemie GmbH of West Germany have signed a new technology license for Wacker-Chemie's patented vinyl acetate-vinyl chloride-ethylene terpolymer technology. The technology license will enable Air Products to introduce low-cost cement modifiers offering performance properties comparable to more expensive acrylic latex systems.

The primary applications for the new products will be in construction as a binder for exterior insulation and finish systems (EIFS) and other textured exterior coatings.

Air Products has begun introduction of new products. Commercial quantities of the products manufactured by Wacker-Chemie are available immediately. In 1987, production will begin at existing Air Products facilities in the United States.

This is the latest technology licensing agreement between Air Products and Wacker. In 1983, Air Products licensed technology for redispersible spray-dry vinyl acetate-ethylene powders which are used in thin-layer portland cement applications including EIFS and stucco coatings. A 15 million-pound-per-year plant to produce these powders is currently under construction at Air Products' Calvert City, Ky. facility.

A study by the Congressional Research Service, citing DOT statistics, indicates that more than 80 percent of truck accidents and spills involve human error on the part of drivers or other workers such as loaders.

Congress is expected to make more comprehensive changes in hazardous material transportation law next year.

Akzo, Kollmorgen Set Electronics Venture

Kollmorgen Corporation, a Stamford, Conn. electronics and instruments maker, and Akzo N.V. last week reported that they have reached an agreement in principle to establish a partnership to manufacture and sell materials for the worldwide electronics market.

Akzo would own 65 percent of the venture and Kollmorgen 35 percent, according to the companies. The partners would transfer several of their current developing materials technologies to the joint venture, including Akzo's proprietary high-temperature polyimide flexiblmetal-clad substrates and Kollmorgen's gallium arsenide wafer material and processing material technologies.

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Biotech Agreement For Du Pont Ag Unit

E.I. du Pont de Nemours & Co. says it has entered into a multi-million dollar, multi-year research agreement with Advanced Genetic Sciences Inc., an Oskar, Calif., biotechnology firm.

The research contract, aimed at developing new commercial biotechnology products, reflects the diversification strategy of DuPont's agricultural division.

The company already has a plant biotechnology research program and intends to enter several markets in that field. The research agreement with Advanced Genetic Sciences will not only enhance DuPont's research efforts, but will also help to more rapidly and effectively achieve our goal of commercializing the results of this research," says agricultural group vice-president Dale E. Wolfe.



James E. Depew, who has been appointed vice-president of purchasing for Glidden Company. Mr. Depew will be responsible for the acquisition of all chemicals, solvents, titanium dioxide and supporting raw materials. He has been with Glidden since 1972.

Du Pont Slates Plant For Japanese Group

E.I. du Pont de Nemours & Co. says it will construct a plant to produce "Krytox" vacuum pump fluids and fluorinated lubricants in Japan.

DuPont Japan Ltd. will begin construction in October, with completion scheduled for the first quarter of 1987. The plant, DuPont says, will support a 20 percent annual increase in demand for the fluids in Japanese and other Asian and Pacific markets.

According to the company, the fluids have achieved good acceptance in the semiconductor industry. Right now they are produced at the company's Deepwater, N.J., Chambers Works. In addition to the fluids, the new Japanese plant in Japan will produce a line of compatible greases and lubricating oils.

Molycorp Yttrium On Stream in Canada

A plant that recovers yttrium concentrate from a Canadian uranium mine is supplying feedstock to Molycorp, Inc., the leading yttrium refiner in the US.

The plant, which began service in September, was built by an international joint venture that involves Molycorp. The site is a uranium processing complex operated by Denison Mine Ltd., a partner in the joint venture.

Yttrium is used in color televisions, fluorescent lighting, microwave communications and jet engine metal alloys.

Other participants in the joint venture are Unocal Canada Limited and SM Yttrium Canada Ltd. Unocal Canada Limited and Molycorp are subsidiaries of Unocal. SM Yttrium Canada Ltd. is a company formed by Shin-Etsu Chemical Co. and Mitsui and Co. both of Japan.

Holtrachem Sets Up West Coast Branch

Holtrachem West, Inc., a subsidiary of Holtrachem, Inc., Natick, MA, has been established at Anaheim, Calif. Lance Renfrow has been appointed vice-president and general manager. Privately-held Holtrachem with claimed annual sales of \$33 million, says it is the largest distributor in the United States of liquid caustic soda, vinyl acetate, acetic acid, liquid caustic potash, and hydrogen peroxide for the textile industry.

Holtrachem West, Inc. will pursue the parent company's policy of distributing primarily Liquid Chemicals utilizing its own fleet of tanktrucks and railcars.

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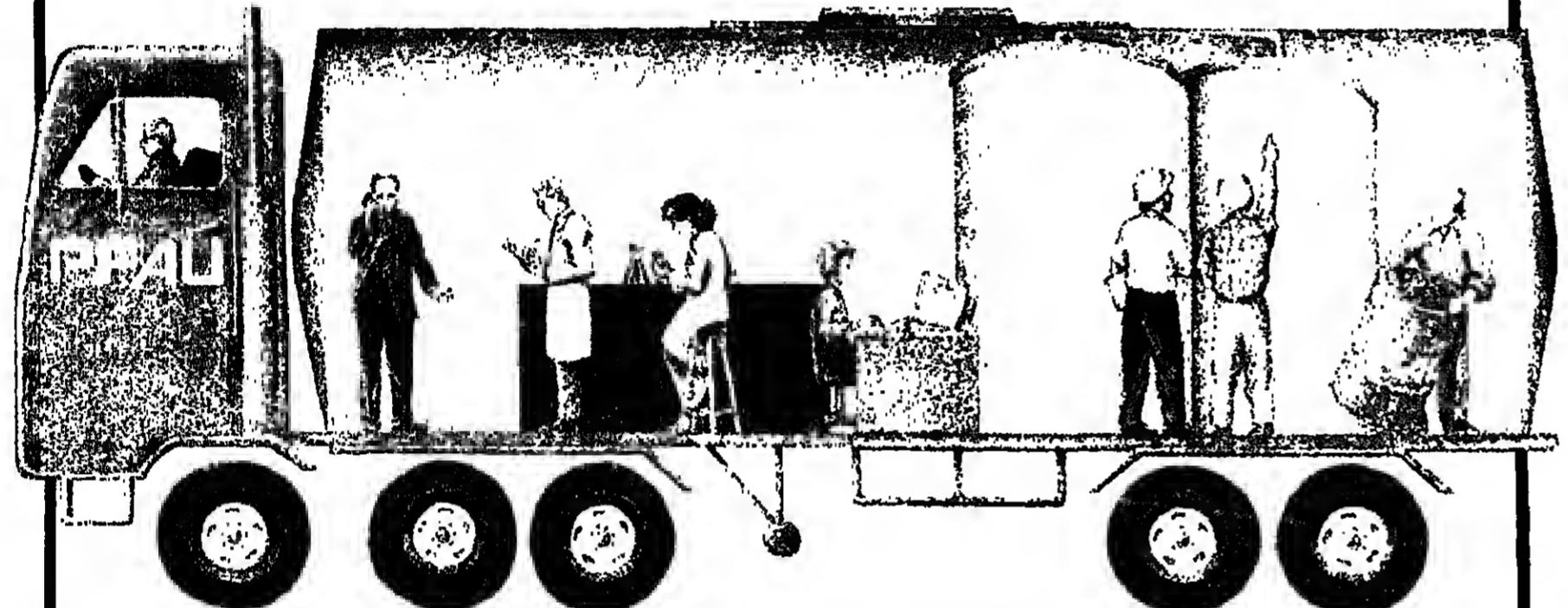
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Bristol-Myers Gets OK

Bristol-Myers Company received regulatory clearance last week to market its new anti-anxiety drug in the US. The company expects to introduce the product nationwide in early December.

"BuSpar" (buspirone hydrochloride) is a chemically unique compound, according to Bristol-Myers, and is not related to the benzodiazepine family of drugs, including "Valium," the tranquilizer sold by Hoffmann-La Roche Inc.

"BuSpar" is said to be less sedating than other anxiolytics and does not exacerbate the effects of alcohol.

"Unlike the benzodiazepines," Bristol-Myers says, "BuSpar" does not cause the euphoric or sedative effects which can often lead to abuse, and clinical studies concluded that "BuSpar" is unlikely to be utilized by illicit drug users."

The company says the drug causes slight dizziness and minor stomach aches in a small percentage of patients who

were given the drug in clinical trials, beginning in 1978.

David Saks, drug analyst and senior vice-president at Morgan, Olmstead, Kennedy & Gardner, thinks "BuSpar" could be the "biggest brand of all time" for Bristol-Myers.

He expects the drug to generate US annual sales of \$250 million or more within five years of introduction. Roche's "Valium," now off patent, currently generates annual sales of just under \$900 million, down from a peak of around \$450 million annually.

The new drug, which will be sold on a prescription basis, was developed by Mead Johnson & Co., a subsidiary of Bristol-Myers. A new drug application (NDA) was submitted to Food & Administration in 1982. The drug has also received regulatory approval abroad, and is already on the market in West Germany.

Bristol-Myers says the drug's market will not overlap with the company's anti-depressant agent, "Desyrel."

Chemical Pricing: Turn for the Better

Pricing levels for some key chemicals head into the final stretch of 1986 in much better shape than in mid-Summer, thanks to a combination of good demand and the agreement on crude production by members of the Organization of Petroleum Exporting Countries.

For example, in the aromatics market, benzene contract pricing enters the fourth quarter at 85 cents per gallon, having firmed 15 cents per gallon since bottoming out August 1 at 70 cents per gallon.

The turnaround was propelled by the OPEC agreement on production restrictions. As long as OPEC plays a major role in the world oil market, its policies will have a significant impact on benzene pricing.

The spot toluene market rebounded from a low point of 60 cents per gallon at the beginning of August to 74 cents per gallon in mid-September, before falling off the past couple weeks to a current level of 67 cents per gallon.

Strong octane-enhancer demand for toluene, both in the US and in Europe, is seen as a major factor providing upward pressure on basic aromatics pricing, and motorists' movement towards unleaded gasoline should continue to be a driving force in the market in the months to come.

Responding to the higher benzene costs, derivatives pricing has been moving up.

Prescription Drug Code Adopted by US Producers

R.J. Ventres, who has been named chief executive of Borden, Inc. Mr. Ventres joined Borden, Inc. in 1957 as an assistant chief engineer. He has been president of Borden since July 1985 and will retain that position.

better wholesaler recordkeeping, and limiting sample distribution to physicians.

Under the sampling system, manufacturers' representatives provide starter packages to physicians for use with patients. Mr. Mossinghoff says patient starter packages enable a physician to begin therapy immediately in cases, for example, where patients are in pain or developing infections, and allows the physician to evaluate the drug immediately in a newly diagnosed patient.

If a product is not working as intended, the medication can be changed or the dosage modified without expense to the patient.

Under the voluntary code, PMA member companies will distribute samples only to licensed practitioners after a written request and take steps to guard against theft and diversion.

They are also obliged to return all outdated or damaged samples to the company for disposal and will conduct an annual review of all samples in the possession of their sales representatives.

Magnesium Plant Is Slated By Norsk Hydro For Canada

the plant will gradually reach full capacity by 1990/01.

Norsk Hydro has entered into a 25-year power contract with Hydro-Quebec, which also secures the electricity supply for substantial expansion of the magnesium production. Power transmission capacity is very high and supplies are very reliable in the Beauce area.

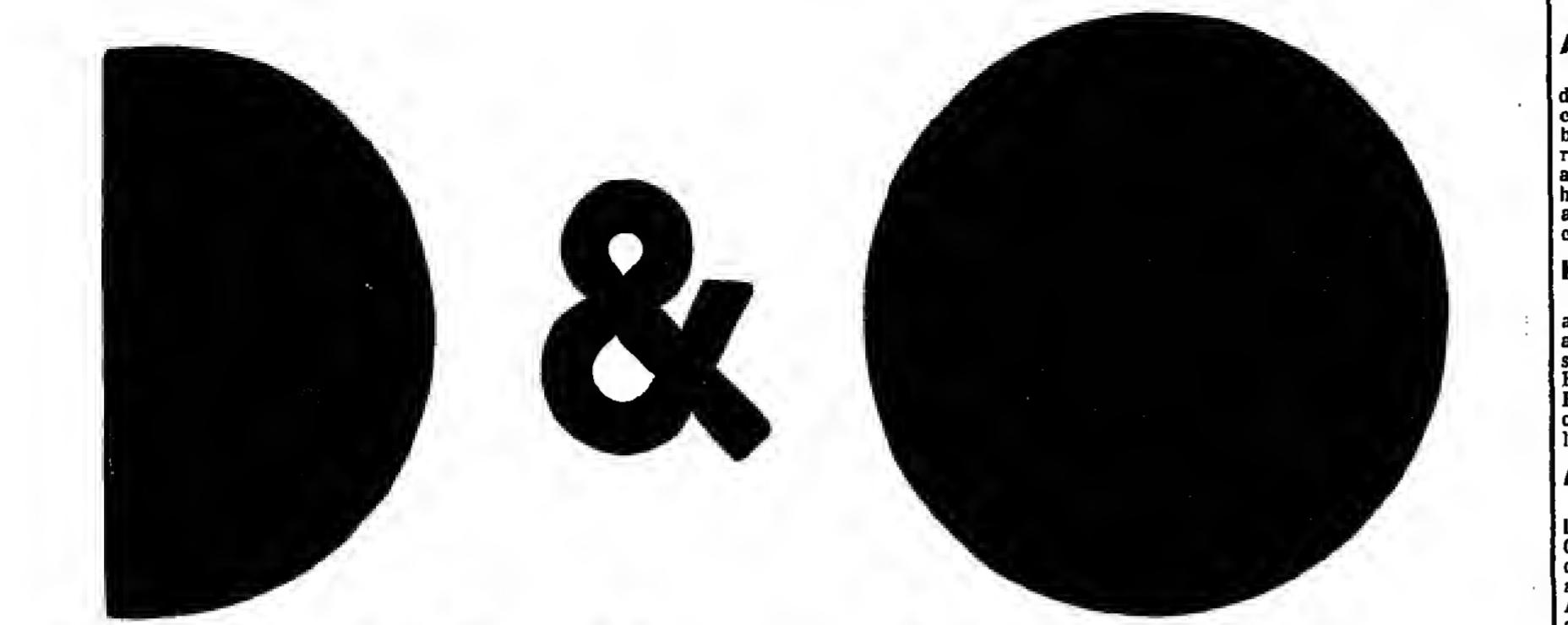
The plant represents a challenge since it will mean a 25 percent increase in the Western world's supply of magnesium, Norsk Hydro says. The company is therefore intensifying its efforts to find new areas of application through active technical marketing and the deployment of substantial R & D resources. A separate technical marketing group has been established, based in the US. The group will co-operate with Norsk Hydro's R & D center in Norway and will also work on specific development projects in the US.

Norsk Hydro believes that magnesium consumption is likely to increase by about 4 percent per year in the years ahead. Magnesium for desulfurizing iron and steel is a large growth area, but the largest potential is in the automobile industry.

Construction is planned to commence in April next year. It is expected that production can start in the Spring of 1989 and that

Continued on Page 15

CLUE #3: THE ANSWER



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SOCIAL MARKETING REPORTER

October 8, 1988

News Capsule

Alcan Cuts Reduction

Alcan Rolled Products Company will discontinue production of specialty bare coil, bright trim products and coated building products at its Warren, Ohio, rolling and coating facility. The amount of aluminum used in auto and appliance trim has dropped because of styling changes and the use of substitute materials, the company notes.

Kaiser Pays Penalty

Kaiser International Corporation has agreed to pay a civil penalty of \$5,500 for alleged violations of antitrust provisions of the Export Administration Act. Kaiser allegedly furnished information to Bahrain stating that certain goods did not originate from Israel or from a blacklisted company.

Atotech Marketing Plans

Atotech Inc. will handle US marketing of hydrogen peroxide manufactured in Canada by Oxychem Canada Inc. Oxychem is jointly owned by L'Air Liquide and Atotech, a subsidiary of the Elf Aquitaine Group. Oxychem Canada is scheduled to go on stream with the new 44-million-pound hydrogen peroxide plant next September.

BP Develops Solvent

BP Chemicals has developed a new oxygenated solvent for the surface coatings and adhesives industries. The solvent, "Bisol" K, has been designed as an alternative for both MEK and MIBK and is said to offer coatings formulators significant cost savings.

Searle Forms Venture

G.D. Searle & Co. has entered a joint venture agreement involving drug delivery systems with Medi-Control Corporation, a subsidiary of Biotechnology Development Corporation. The venture will "complement our in-house research and provide impetus for development, manufacture and marketing in a direct extension of Searle's pharmaceutical business," the company says.

Pfizer Opens Office

Pfizer Inc.'s Oil Field Products Group has opened offices in Houston. Formed in 1982, the group specializes in biopolymer chemicals for enhanced oil recovery. The company says its choice of Texas as a headquarters for its EOR "is a measure of confidence in the vitality of the US Petroleum Industry over the long term."

AOSI Sells Fairfield

AOSI, a private holding company, has sold the assets of Fairfield American Corporation, its US pesticide operation, to Wellcome PLC of the UK for an undisclosed price. AOSI says the sale allows the company to concentrate on activities in specialty lubricants through its American Oil & Supply Co. subsidiary based in Newark, N.J. The company acquired Stauffer Chemical Company's synthetic lubricants business two years ago and is looking for additional acquisitions in the field, says AOSI president John D. Fredericks.

Phosrock in Agrico Plan

Agrico Chemical Company has acquired 14,150 acres of undeveloped phosphate reserves in Hardee and Manatee counties in central Florida from US Dividified Group of USA Corporation. The reserves will extend the life of Agrico's adjacent Fort Green phosphate mine and beneficiation plant by approximately 12 years, says Agrico president, Robert Gwyn. The mine was previously estimated to operate into the mid-1990s.

CasChem, Nepra Join

CasChem Group, Bayonne, N.J., has completed its acquisition of the Nepra, Inc. subsidiary of Schering AG of West Germany for an undisclosed price. Nepra, a producer of pyridines, niacin and niacinamide, had sales of \$46 million last year.



John D. Gottwald, who has been elected vice-president of plastics and energy at Ethyl Corporation.

CD Polycarbonates Are Taking Off Now

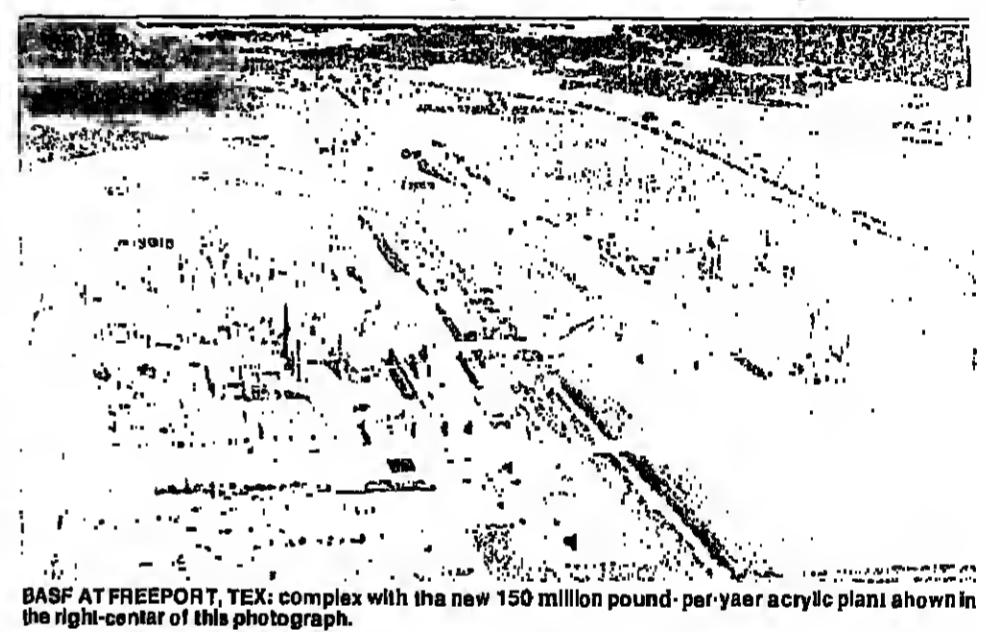
Mobay Corporation has begun commercial production of ultra-pure polycarbonate resin at its Bayport, Tex., plant complex. Its specialty polycarbonate production facility came on line late in August, and has the capability of producing 50 million pounds of "Makrolon" CD-2000 per year, for use in laser-read optical disk applications such as compact audio and digital "read only" memory disks.

The new plant will be the first domestic source of this material. For the past two years, Mobay had imported the resin from Bayer AG, its parent company in West Germany, distributing it in the US under the trademark "Merlon" CD-2000.

Since 1982, Mobay estimates that more than half of the compact disks produced in the US and Europe have been made with "Makrolon" CD-2000 supplied either by Bayer or Mobay.

R.J. Finch, vice-president and general manager of Mobay's Plastics & Rubber Division, states that the Baytown facility should be able to supply the North American markets' current and future needs. In addition to this facility, Mobay will provide domestic molders with full technical service backup.

Continued on Page 39



BASF Corporation Dedicates Acrylic Plant in Freeport, La.

BASF Corporation is today (Monday) dedicating its second world-scale acrylic acid plant at its production complex in Freeport, Texas.

The plant has been producing material since it came on stream on August 10. The 150-million-pound unit brings total annual production capacity for acrylic acid at the site to 300 million pounds.

In addition, BASF announced that it will build an additional acrylic acid plant at its production complex in Ludwigshafen, Germany. Upon completion of the Ludwigshafen expansion, total BASF nameplate capacity for acrylic acid will have been raised from 770 million pounds per year to one billion pounds per year. The expansion in Germany includes additional distillation capacities now under construction.

BASF says it has invested more than \$200 million in recent years in production facilities for acrylic acid and esters at its Freeport complex. In addition to the original acrylic monomer plant completed in 1982, there have been further capacity increases this year to acid distillation and esterification.

Production of glacial acrylic acid was added earlier this year to 80 million pounds. At the same time, 2-ethyl hexyl acrylate was expanded to 55 million pounds.

The new acrylic acid plant is based on the same propylene oxidation process used in 1982 and developed by BASF. The planned expansion from 450 million pounds in Germany to 600 million pounds also adds to the capacity. The plant is expected to begin operations in early 1989.

many currently to 850 million pounds also uses this process. The primary construction contractor for the Freeport facility was H.B. Zachry Company of San Antonio, Texas.

A fair amount of the new capacity in Freeport is aimed at the export market.

Commenting on both expansions, H.J. Kraemer, who heads BASF's Dispersions Operating Division, said, "The growing demand for acrylic acids and acrylic esters is being supported by new applications, including polymers for phosphate-free detergents and the rapidly-growing market for super absorbent hydrogels, such as diapers."

Other growth areas include adhesives applications, clear plastic film lamination, coating binders for paper and cationic drainage aids for paper.

Cyanide Controls Weighed by Gov't

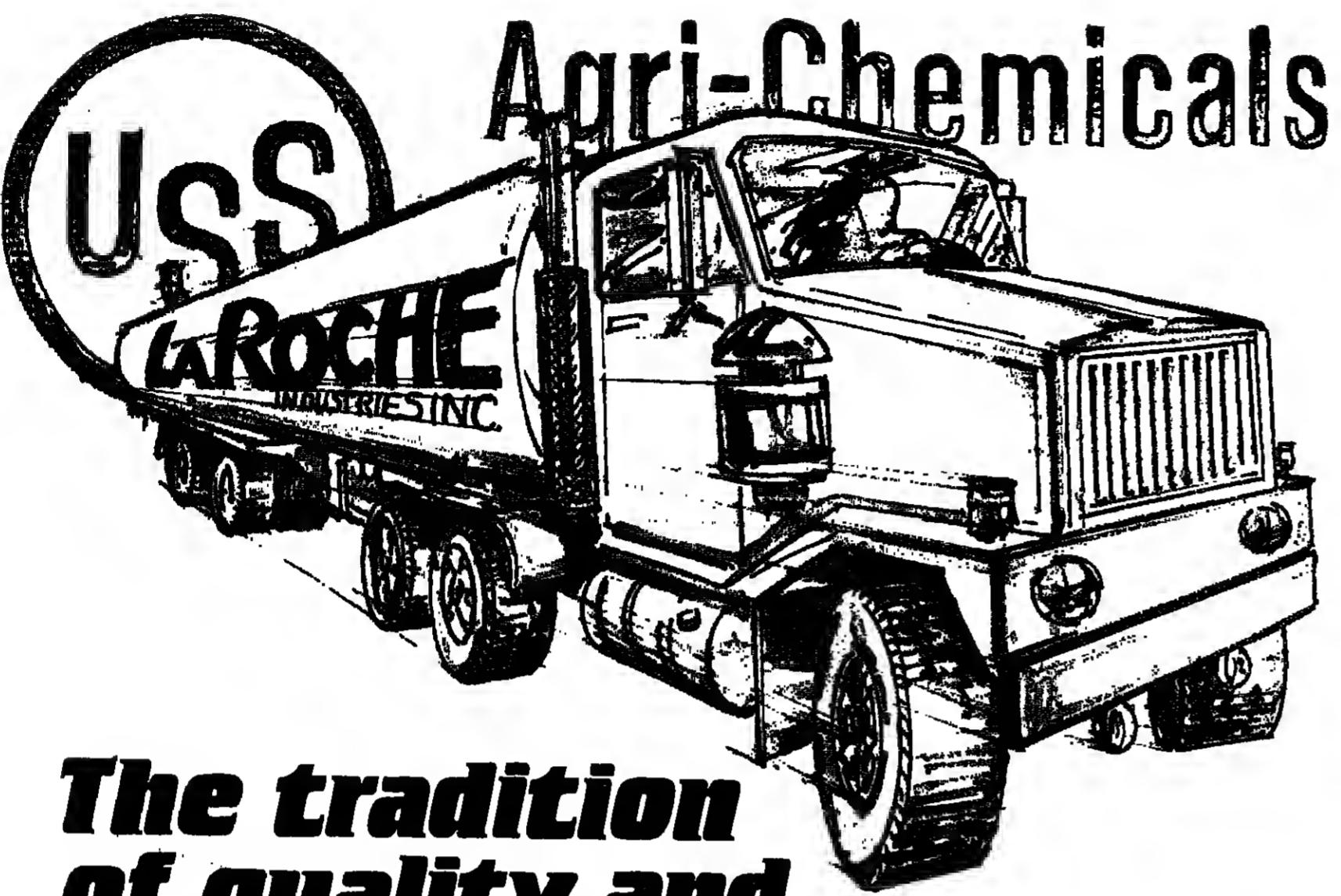
The Senate approved a bill last week requiring a Federal government review of the easy public availability of cyanide, the poison used in 10 drug tampering deaths since 1982 and a rash of recent tampering incidents.

The bill calls for a review by Environmental Protection Agency of the manufacture and distribution of cyanide. It also calls for better EPA controls over the retail sale of the chemical.

October 8, 1988

CHEMICAL MARKETING REPORTER

9



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OILS, FATS & WAXES

Soyoil Rises to Recent High As Rains Hinder Crop Harvest

Pricing on soybean oil is higher than it has been for nearly two months. The price is rising as a result of heavy rains which are preventing farmers from harvesting their crops. Helping to maintain the price strength is a shortage of supplies on the nearby market.

Prices have been widely quoted at above 14½ cents per pound for crude oil, something which has not been seen since early August. By the middle of August the market slid into price levels fluctuating around 13½ cents per pound, where they had remained until last week.

Soaking rains in the Corn Belt states have kept farmers out of the soybean fields there, delaying the rush of new beans and new oil that would ordinarily have begun by now.

Buying for the past few weeks has been done almost entirely on the spot market, sources say. Customers, anticipating new crop oil pressure on the market, have been reluctant to buy too far forward.

Instead, they have been buying in a continual hand-to-mouth pattern, waiting for the soaking rains to end. "People are buying for tomorrow, but not for next week," says a broker. "A lot of buyers waited until now to cover their September and October soy oil needs, and they found new crop oil unavailable," leading to heavy spot market activity, he says.

Although the rain has been delaying the harvest, as well as the anticipated drop in prices, people are not yet worried about rain damage to the crop.

"It's too early to panic," says a trader. However, forecasts for more rain lead some to say that if the wet weather continues for another two weeks or so, there could well be a problem.

MEAL DEMAND DROPS

Contributing to the stronger pricing is a tight nearby oil situation, brought about largely by the hand-to-mouth buying habits of many customers. The oil that is available is concentrated in very few hands, according to a broker, aggravating the shortage.

Also a factor is a drop in meal demand. Previously, soybean oil was plentiful to the point of a glut situation due to heavy meal-driven crush. Now, however, cheap corn prices have reduced the demand for soybean meal, according to industry sources, which has led to a reduction in available oil.

The outlook for the next few weeks is uncertain. People who are optimistic about the rains ending soon in the Midwest feel that the price of soy oil will come down as the beans

are harvested. They also expect general market conditions to stabilize, with more customers buying forward, rather than relying on the spot market and low inventories.

Others, however, while not predicting serious problems with the crop, are keeping a wary eye on the fields. Any problem would, of course, be felt in the price of the oil on the market.

Some traders are also expecting India to

PRICES TRENDLINES

WEEK ENDING OCT. 3, 1988

CHANGES/UP

Cocoanut oil, NY, 2c per lb.
Peanut, 50% bulk, St. Louis, \$3 per ton
Cottonseed oil, Valley, 1c per lb.
Lard, loafs, bulk tanks, Chicago div'd., 1c per lb.
Palm oil, NY, 1c per lb.
Soybean oil, Oscar, .30c per lb.

CHANGES/DOWN

Linseed oil, Minneapolis, 2c per lb.
Peanut, 50% bulk, St. Louis, \$3 per ton
Peanut oil, Southeast (restricted), 1c, per lb.
Soybean, 44% bulk, Oscar, \$.50 per ton

OILS, FATS INDEX

The Oils, Fats & Waxes Index reflects the prices of 11 representative materials in this sector and the quantity of each produced in 1985.

| | |
|----------------|-------|
| Oct. 3, 1988 | 79.85 |
| Sept. 26, 1988 | 81.59 |
| Sep. 8, 1988 | 83.87 |
| Oct. 4, 1985 | 83.31 |

Chemical Prices Start on Page 40

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CHEMICAL MARKETING REPORTER

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OILS, FATS & WAXES

soybean oil price. "People did not buy for a long time, and then they ran to cover" their palm oil requirements, says a trader, who goes on to say that dealers' efforts to cover those sales pushed the market up.

At the moment, trading activity is quite slow. Buyers and sellers are keeping their eyes on the weather situation in soybean growing states, as palm oil prices have been tracking those of soybean oil, sources say. Although there is no real tightness of oil, offers are hard to come by.

Barring a major problem with soybeans, though, market conditions cannot support high palm oil prices for long, says an industry source. Palm oil production is said to be up in September compared to August. Also, consumers are currently staying out of the market in hopes that new crop soy oil will bring prices down.

SAFFLOWERSEED OIL — The price on this oil has risen to 50c. to 53c. per pound, non-break, tanks, N.Y., while quotes on edible oil range from 98c. to \$1.02 per pound in drums, N.Y., delivered.

The price is on the rise in response to reports of crop damage in the Northwestern growing states. The damage is being called very serious, as extensive acreage is seeing sprouting of seeds still in the pods, rendering the affected seeds valueless for crushing.

Many dealers of safflowerseed oil are refusing to accept new customers, out of fear of short supplies in the near future, sources say. "Sellers are much more cautious," says an industry source who notes that the major seller in Montana has withdrawn from the market.

Currently, availability of oil is low, both because of the lack of carryover from last year's crop and because of reluctant sellers. Buying interest is high, with particular concern for forward positions.

SUNFLOWERSEED OIL — The price of sunflowerseed oil is quoted between 14 1/2c. and 18 1/2c. per pound, crude, f.o.b., Minneapolis. A flurry of trading a few weeks ago at the Gulf led to higher prices and short supplies.

The buying interest that brought about the Gulf activity has dried up, sources say, resulting in slow activity throughout the market.

Substantial wind damage was sustained by the crop in North and South Dakota, according to an industry source, who says that close to 100,000 tons of seed were lost. Another source says that it is too early to say how much of the crop was ruined, but that it could well be upwards of 10 percent.

FATS & GREASES

TALLOW — The tallow market is slowing

its advance as consumer interest has begun to wane. Buyers had been supporting a stronger market in recent weeks, but are easing off their demand, apparently finding themselves more comfortable with their current supply levels.

Although the market is continuing to be strong and firm, it is in a standoff situation as consumers seem unwilling to meet sellers' prices. At the same time, more material has become available on the market, easing slightly the tight situation of recent weeks.

FATTY ACIDS

TALL OIL — Tall oil fatty acid (TOFA) production was up in August compared to the output during July, according to Pulp Chemicals Association figures.

Production of 2 percent and over rosin content fatty acid was 19.3 million pounds in August, up 13.7 percent over July's output of 17 million pounds.

For less than 2 percent rosin TOFA, August production was 18.8 million pounds, representing an 18 percent increase over July's level of 15.9 million pounds.

Soybean Export Promoted by US

Department of Agriculture plans to launch an \$8.5 billion program to expand exports of US soybeans to the European Community by stepping up promotions for soybean oil.

Program funds will be used to increase European consumers' awareness of the benefits of soybean oil and also to provide technical assistance to processors to ensure that a quality product is produced, officials say.

"We want to increase soybean oil consumption in the European Community and thereby increase demand for US soybeans," says USDA Undersecretary Daniel G. Amentz. "This program is an attempt to counter EC production aids and crushing subsidies for oilseeds."

Promotional activities will be carried out cooperatively through an agreement between USDA's Foreign Agricultural Service and the American Soybean Association, a nonprofit commodity organization representing U.S. soybean growers.

The American Soybean Association will coordinate the activity on behalf of U.S. soybean growers. USDA will reimburse the Association with generic marketing certificates for commodities owned by the Commodity Credit Corporation.

The targeted export assistance program will be administered by the Foreign Agricultural Service in accordance with Section 1124 of the Food Security Act of 1985.

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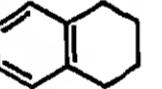
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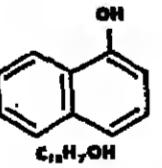
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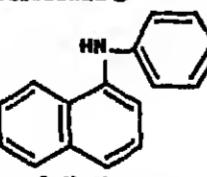
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AROMATIC ORGANICS

Bisphenol-A Coming on Strong With Polycarbonates Expanding

Producers of Bisphenol-A say that the market, driven by strong demand for polycarbonate resins, is lighter than earlier in the year. This picture is in the process of being altered, however, by new capacity coming on stream this quarter for two of the four domestic producers.

Polycarbonate resin demand, which accounts for about 45 percent of the BPA market, is expected to average a 7 to 8 percent growth rate for the year, averaged from among such applications as automotive, gazing, machine housing, metal replacement, and compact discs.

The other major BPA end market, epoxy resins, is said to be growing more slowly since it is more mature. A 2 to 3 percent annual growth rate is expected for this segment, which accounts for approximately 46 percent of BPA demand.

Producers report list prices of 71 cents per pound for polycarbonate-grade material, and 67 cents per pound for epoxy resin-grade material. They say that selling prices were stable during the third quarter.

Producers observe that, while feedstock phenol pricing has increased 2 cents per pound for the fourth quarter, BPA pricing does not generally respond accordingly. "BPA pricing is not really tied to the raw material, but to the end markets," comments one producer.

Seen in this way, the strong polycarbonate resin demand, combined with anticipated turnaround by three of the four producers during the fourth quarter, makes a strong pricing outlook.

SUPPLY DISRUPTIONS

A spokesman for USS Chemical, which has not announced scheduled until next year, says that a number of buyers are looking around for material because their regular supplier will be experiencing downtime. The market appears light enough that "even short shutdowns can cause disruptions in supply," he says.

Export demand is said to be contributing to the strong growth rate for the polycarbonate resin sector. Overseas BPA demand for polycarbonate resins, particularly in the Far East, "is growing every bit as fast (7 to 8 percent) as the US," says a producer.

It is pointed out that shifting exchange rates have fostered US penetration of the European market for polycarbonate resins.

However, producers note that BPA demand from the epoxy resin area has been weaker abroad than at home. Epoxy resin demand in the US, though not growing at a high rate, is "as strong as any place in the world," one producer comments.

US exports of BPA during the first seven months of the year totaled approximately 51 million pounds, up substantially from approximately 33 million pounds that were exported during the same period of 1985, according to Bureau of Census.

The new capacity in the industry comes on stream at a time when "all producers are operating their plants as hard as they can run," according to one producer, who says the demand pickup in recent months will likely result in an average operating rate for the year of 90 percent.

General Electric Company is in the startup

PRICE HIGHLIGHTS**AROMATICS IN SEPTEMBER**

| | CONTRACT | SPOT |
|----------------|---------------|----------|
| Aniline | lb. 33-35% | .24-.28 |
| Benzene | gal. .80-.85 | .78-.84 |
| Cumene | lb. .14%-14% | .14%-14% |
| Cyclohexane | gal. .88%-89% | N.A. |
| Phenol | lb. .20-.22 | .18-.20 |
| Styrene | lb. .19-.22 | .16-.21 |
| Toluene | gal. .87-.73 | .85-.74 |
| Xylenes, mixed | gal. .80 | .72-.78 |

Continued from Page 7

of the tank before it failed, and the probable sequence of events leading to failure.

Chemical and mechanical testing showed that the materials used to build the tank met or exceeded specifications, and that the welds were stronger than the base metal.

Corrosion and hydrogen cracking tests

AROMATICS

price range of 82c. to 82 1/2c. per pound is quoted.

Pricing is said to have been stable in recent months, and no change is believed forthcoming. This is in spite of a regular flow of imports quoted at 55c. per pound for technical grade.

Producers acknowledge that, although there is some discounting in the industry off of list pricing, imports are not competitively met head-on. The import pressure is said to be less noticeable in the food-grade area, where documentation and analysis of products are more strict.

General Electric would not disclose size of the new facility, but an info source estimates it has a capacity of 1 million pounds per year. A captive price

were performed on samples from the tank, and showed that the materials were indeed susceptible to hydrogen pressure cracking in the sort of environment that existed in the tank.

Magnetic particle, ultrasonic, and metallurgical studies of the fracture surfaces and adjacent areas revealed that extensive cracking had occurred, particularly in the heat-affected zone near repair welds. These areas near welds were hardened by the repair welding and especially susceptible to hydrogen cracking.

One of the cracks extended more than nine-tenths of the way through the inch-thick tank wall, leaving insufficient steel to contain the internal pressure. Once a leak penetrated at this crack, the crack continued to grow right around the tank, like unzipping a zipper. The final, near-instantaneous fracture was triggered by this crack because the toughness of the steel had been reduced by hydrogen embrittlement.

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In contending that flake and molten are separate products, USX says that the necessary additional equipment and facilities to convert molten to flake is considerable, the price spread between the two products is significant, the customers are different due to significantly different use characteristics, and changes in the relative prices of molten and flake do not cause users of one to switch to the other. The Venezuelan argument aims to refute these points.

Pressure Vessel

Continued from Page 7

of the tank before it failed, and the probable sequence of events leading to failure.

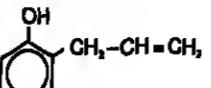
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Corrosion and hydrogen cracking tests

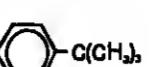
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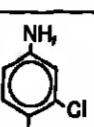
o-Allyl Phenol



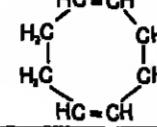
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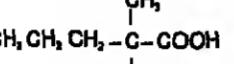
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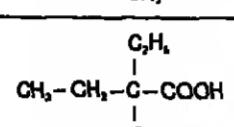
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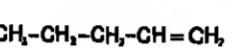
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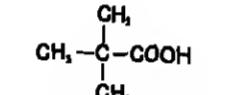
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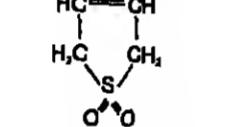
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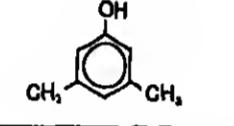
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Acid Rain Poll Finds Concern Among the Public

A poll conducted for the National Wildlife Federation shows that a vast majority of Americans think that acid rain is a serious problem and that the quality of the air has not improved over the past five years, National Wildlife Federation said last week.

Seventy-five percent of those polled indicated that acid rain is either a "very serious" or "somewhat serious" problem, according to the association. While most respondents correctly identified coal-burning electric power plants and automobile emissions as the two principal sources of pollution which cause acid rain, 40 percent of those surveyed incorrectly chose nuclear power plants as a source.

"As acid rain's threat to human health, agricultural productivity becomes more evident, public concern will grow," the association said, pointing to the view of citizens as it fails to enact legislation to curb emissions which cause acid rain." We said.

The time has come for both the Reagan administration and the Congress to act in the will of the electorate by taking immediate and decisive action to combat the massive acid rain problem. There can be no better solution than further stalling on the soft legislation which has been before the Congress," he adds.

The poll, conducted in August by Opinion Research Corporation for the National Wildlife Federation, sampled the opinions of more than 1,000 Americans, representing the general population of the United States.

Four of ten surveyed feel that utility companies should pay most of the cost of cleaning up acid rain while three of ten chose the Federal government. Only 11 percent feel state and local governments should bear the costs and a mere 9 percent think consumers should pay most of the costs.

Nearly half of those surveyed indicated that the general quality of the air has worsened in the past five years while 37 percent say it has remained about the same. Only 11 percent of the respondents feel that air quality has improved.

"This survey is further evidence of Americans' concern about the acid rain problem and air quality generally. The people of this nation understand the seriousness of acid rain and have clear and strong feelings about the responsibility for cleaning it up," said Jay

W.R. Grace & Co. says its research team developed a new admixture that can "markedly increase" the strength and durability of concrete.

Grace says the new product will be available for architects, engineers and others in construction and real estate industries.

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ALIPHATICS

September and firmed by as much as 1 cent per pound to 9 1/4 c. per pound. Marketers will continue to push for higher pricing in October as they ask for price increases up to 2c. per pound.

VINYL CHLORIDE MONOMER — After reaching a low of about 14 1/4 c. per pound during August, VCM has gained as much as 1c. per pound for sales negotiated in September. Says one marketer, "supplies are tight and prices will be volatile through the Fall."

Prices for sales negotiated in September are quoted between 15c. and 15 1/4 c. per pound.

Trade Zone

Continued from Page 3

justifies such a setup and that, if need be, the arrangement could be corrected later on.

Negotiations leading toward such an agreement between the Common Market and the Gulf States probably would take three to four years to complete, Vicomte Davignon estimated.

Queried about his free trade zone, he made it clear that it would be a two-way arrangement between the EC and the Middle East countries and that others, such as the US and Japan, would be excluded. He maintains that such a pact is legally permitted under the provisions of the General Agreement on Tariffs and Trade.

Industry leaders at the EPCA meeting were cool to the Davignon proposal, arguing that the Gulf States are shipping only petrochemicals to Europe at the present time, and right now the only Middle East country that is doing that is Saudi Arabia.

Generally they feel that more time is needed to see how trade develops between the EC and the Gulf States before seriously exploring the Davignon proposal.

T. O. Hutchinson, a director of Imperial Chemical Industries PLC, told the EPCA members that he believes a period of "sustainable profitability" is within the grasp of Western Europe's petrochemical producers if they can build on their strengths and avoid their former mistakes.

The recurring themes of past EPCA meetings, he noted, have been low prices, poor profitability, overcapacity, short-sighted marketing policies, environmental problems and overestimated future growth. It is significant, he noticed, that such topics as product innovation, research and technology have been missing from the list.

Today, he feels there are a number of pluses going for the industry. Overcapacity of the major petrochemicals in Western Europe has largely been eliminated, Mr. Hutchinson observed. Furthermore, considerable flexibility has been designed into crackers.

In the mid-1980's, European petrochemical operators fed naphtha almost exclusively

into their crackers. Currently, only 70 percent of feed is naphtha with the balance light oil, LPG and ethane. Industry occupancy these days, the ICI executive stated, are better than they have been at any time since the early 1970's.

"Perceptions of growth are now more realistic than hitherto," he continued, and this has been reflected in a wiser approach to investment." He also pointed to the industry's ability to innovate at the process and product levels, citing the development of faster-growing, market-focused derivatives within the bulk sector. Another big plus added, is the fact that much has been done to improve the environment.

On the minus side, Mr. Hutchinson emphasized, is that profitability, while better than during the early 1980's, is still inadequate to justify reinvestment in petrochemicals. He leaves open, he said, an unanswered question for the 1990's.

Pointing to the inaccuracy of earlier forecasts, Jacques Puccini, chairman of Atochem, asserted that it is difficult to predict what future growth will be with the industry has been so mistaken in the past. He suggested that profitability must be better now, while the general economic situation is better.

Mr. Puccini argued that the established producers in Europe, Japan and the US must share equally the burden of newcomers in the field. However, he said, he is confident about Europe which, he feels, has a big edge in raw materials.

"The cheapest way to move crude oil is end-market in Europe," he maintained, "still to refine it in Europe and to deliver directly to the market."

Trinidad Firm Plans Expansion

Financing agreements have been signed for a \$230 million ammonia project of Trinidad Nitrogen Co., Ltd. (TrinGen), a corporation owned 51 percent by the Government of Trinidad and Tobago and 49 percent by W.R. Grace & Co.

The expansion by TrinGen will more than double its ammonia capacity from 380,000 metric tons per year to 810,000 tons by adding a second, complete plant adjacent to the existing facilities at Port Lisas on the West Coast of Trinidad.

The venture will utilize the extensive natural gas reserves in Trinidad and Tobago, and will generate net foreign exchange benefits for the country estimated at \$38.1 million per year.

The government has been attempting to reduce its dependence on the petroleum sector, which currently accounts for most of the nation's exports.

In addition to production facilities, the project includes two storage tanks, a new loading dock and electricity generating facilities.

Funds are being provided primarily by the International Finance Corp., the World Bank affiliate which finances private sector business in developing nations. Technical support and project management is being provided by a Grace subsidiary.

nation poses no threat to public health because it is generally confined within plant boundaries or quickly becomes diluted or dispersed if it has migrated away.

Sen. John Glenn, D-Ohio, a member of the Senate Governmental Affairs subcommittee on nuclear proliferation for whom the report was prepared, called the information "shocking and frightening."

"What these figures show is that the Department of Energy and its predecessors have been carrying out their mission to produce nuclear weapons with an attitude of neglect bordering on contempt for environmental protection," says Sen. Glenn, who released the report.

According to the report, nitrates and chloride are above drinking water standards at the Feed Materials Production Center in Fernald, Ohio. At the Savannah River complex in South Carolina, solvents have been reported at levels more than 30,000 times greater than drinking water standards allow.

And at the Y-12 Uranium Separation and Material Fabrication Plant at Oak Ridge, Tenn., solvents have been detected at levels 1,000 times greater than proposed drinking water standards and mercury has been detected at levels 500 times the standard. Mercury has also contaminated an off-site creek bed and its flood plain.

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Textile Makers Again Gear Up

Nothing short of legislation spelling out fair trade will ever solve the textile and apparel industry's imports problem, Dewey L. Trogdon, president of the American Textile Manufacturers Institute, said last week.

Speaking before some 300 members and guests at the opening session of the 80th annual meeting of the North Carolina Textile Manufacturers Association last Thursday, Mr. Trogdon, chairman of Cone Mills Corporation, said, "Textile and apparel imports are entering the country at the rate of 30,000 square yards per minute."

"At a rate of more than 1 billion yards a month, that's enough material each month for a shirt for every man, woman and child in the United States," he said.

The industry "cannot wait for the govern-

ment to recognize the compelling case for erecting a strong and comprehensive trade policy, because that day may never come."

"The 276 votes for the textile bill override were votes of no confidence in the administration's conduct of international trade," he said.

"Nothing but a law spelling out fair trade will produce fair trade," Trogdon said. "Not promises, not presidential commitments. Not bilaterals. Not MFAs, not studies, not commissions, not a strong dollar, not a weak dollar, nor congressional letters to Ronald Reagan or speeches," he said.

"In every month since the original textile legislation was introduced in March 1985, a record has been set for imports or for the textile and apparel trade deficit," he said.

"Since the bill was vetoed last December 17, with textile trade it has been business as usual. Imports shot up 42 percent in January. In February another new record."

"And in July 1989 — the highest month in history — 1.256 billion square yards were imported. The textile and apparel trade deficit, a record \$19 billion in 1984 and \$18

billion in 1985, likely will go over \$20 billion in 1989."

And the situation is going to get worse, Mr. Trogdon predicted. Pointing to what he called "outrageously generous" agreements with Hong Kong, Taiwan and Korea, he said the United States signed away another chunk of the American market in an agreement with Turkey.

"Oil and Gas Act Backed by NAM

The National Association of Manufacturers last week urged the Senate to adopt the "Oil and Gas Production Revitalization Act" to "ensure our domestic energy solvency and...an energy secure future."

In a letter sent to all senators, Alexander Trowbridge, N.A.M.'s president, said, "S. 2957 would remove impediments to domestic research, exploration, and development that

are sorely needed in the short-term, while providing long-term guidance and policy evaluations at the highest level of government to ensure...energy solvency and...an energy secure future."

The bill is expected to be considered before adjournment, possibly in the form of an amendment in other pending legislation.

Mr. Trowbridge pointed out that, while N.A.M. members have enjoyed the benefits of cheaper energy, "the bloom may soon be off the rose."

He said domestic energy supplies and national security could be adversely affected by the fact that foreign oil cartels can readily dictate prices in the world oil market. While such effects have more long-term implications, he said certain actions indicate that they should be of concern to legislators.

"The count of active rotary drilling rigs in the U.S. has fallen from a high of 4,530 in late 1986 to 740 as of September 15, 1989," he wrote. "Major domestic oil companies are reducing their technical research and exploration budgets by as much as 25 percent in the coming year, and the 'tickle down' effect of the energy industry crisis is being felt in all sectors of the economy."

Mr. Trowbridge concluded by saying, "I remain convinced that an increasing reliance on unstable foreign sources for our energy security is an unacceptable scenario in price. A sound volume of domestically produced oil and gas must be secured."

DuPont, DNA Firm Are In Agreement

DNA Plant Technology Corporation and E.I. DuPont de Nemours & Co. have agreed to cooperate on the development of new and added plant varieties which will benefit the food industry.

Under the multiyear agreement, DuPont will support DNAP's application of biotechnology to develop proprietary plant varieties which specified desirable characteristics are enhanced. The agreement also provides for DNAP to participate in the commercial opportunities arising from the research.

"This proprietary research and product development work is a significant first step in the application of our technologies for added value to plant-based products of major commercial importance," says Richard L. Lutz, president and Chief Executive Officer.

Precision Aerotech Offering 1 Million Shares

Precision Aerotech, Inc., has filed with Securities & Exchange Commission for an initial public offering of 1 million shares of common stock, of which 900,000 will be sold by the company and 100,000 by certain selling shareholders. Net proceeds will be used to repay bank debt and assumed to make acquisitions. Application has been made to list the shares on the New York Stock Exchange.

Procter & Gamble Selling South African Company

Procter & Gamble Company, Cincinnati, Ohio, has agreed to sell the South African operating unit of its Richardson-Vicks Incorporated subsidiary to Whelk Investments Pty. Ltd., a company recently formed by Richardson-Vicks' local South African management.

In the 1985-1989 fiscal year, the South African operation had sales of about \$12 million and earnings of about \$250,000, producing and marketing a number of health and personal care products from a facility near Johannesburg. Earlier this year, P&G sold RVI's home care products unit — primarily Formby's products for furniture care — and the Mill Creek line of hair and skin care products.

Schering-Plough to Resume Capital Stock Purchases

With completion of the acquisition of Key Pharmaceuticals Inc., Schering-Plough Corporation is reconstituting a plan to purchase a maximum of \$300 million worth of its capital stock, of which there are now 82 million outstanding shares. Robert P. Luciano, chairman and chief executive officer, laid a meeting of British financial analysts and portfolio managers in London.

Capital expenditures will total about \$120 million this year, having eased from a peak of \$180 million in 1982, Mr. Luciano noted. Expenditures next year will be at the same level, but this will include about \$10 million for Key, which was not in the full-year 1985 budget.

Newmont Recapitalizing Magma Copper Subsidiary

Newmont Mining Corporation, the New York-based diversified producer of gold and other metals, has adopted a plan to recapitalize a wholly-owned subsidiary, Magma Copper Company, by contributing to the company's capital the stock of another 100 percent owned subsidiary — Pinto Valley Copper Corporation, and all but \$100 million of intercompany debt.

This restructuring will allow Magma Copper to raise the funds needed for a major retrofit and expansion of Magma's Arizona smelter and an expansion of its refinery, and for an anticipated in-situ oxide ore leaching project.

Under the plan, 90 percent of Magma's common stock will be distributed as a special dividend of Newmont shareholders after Magma has arranged the smelter-related financing, said Gordon R. Parker, chairman of Newmont.

Church & Dwight Buying Veterinary Business

Church & Dwight Company, Princeton, N.J., is expanding its agricultural business by filing a letter of intent to acquire the stock and assets of National Vitamin Products Company, Minneapolis, Minn., from the Stanchfield family.

National Vitamin produces milk-based products for the dairy herd replacement, veal, lamb, borsa and specialty markets, and is the third largest supplier of milk replacers to the dairy herd replacement market.

Pharmacia Raising Stake in Electro-Nucleonics

Pharmacia Inc., Uppsala, Sweden, has signed a contract to acquire 470,000 shares of the outstanding common stock of Electro-Nucleonics Inc. Together with Pharmacia's existing ownership of 250,000 ENI shares, this will bring the Swedish company's interest in ENI to approximately 16 percent. Pharmacia has the right to increase the holdings to 20 percent.

Chemical Finance

Five Sources of Gas Available on Short Notice

Five sources of natural gas are available on twelve months' notice any time the current US surplus is used up, according to American Gas Association. They are: uncommitted gas in the Continental US, up to 1 trillion cubic feet; Infill drilling of existing fields, up to 400 billion cubic feet; Mexican gas, up to 200 billion cubic feet; and liquefied natural gas, up to 50 billion cubic feet.

"Overall," said AGA president George H. Lawrence, "there is a short term gas supply response potential of 1.15 trillion cubic feet to 2.45 trillion cubic feet per year that is available for use in the next few years."

Genex Chairman Purchases Shares From Koppers

Robert F. Johnston, chairman and co-founder of Genex Corporation, Gaithersburg, Md., has purchased 1 million shares of Genex common stock from Koppers Company in a private transaction. As a result, Mr. Johnston became the largest Genex shareholder, owning almost 2 million shares — 16 percent of the total outstanding. Koppers continues to hold just under 11 percent.

Genex is a leader in the application of protein engineering technology. The company manufactures an enzyme-based drain opener and markets it through distributors and manufacturing representatives nationwide.

Kaiser Aluminum Expects Better Results

The Aluminum Division of Kaiser Aluminum & Chemical Corporation expects to report a third-quarter 1988 operating loss sharply lower than the \$36 million loss recorded a year ago. Cornell C. Maller, chairman, told a meeting with security analysts at the company's facilities near Spokane, Wash.

The company's two major rolling mills — the newly modernized Trentwood plant near Spokane and the Ravenswood, W.Va. plant — have now positioned themselves to create additional gains in overall Aluminum Division efficiency, Mr. Maller said.

PPG Completes Acquisition From Litton

PPG Industries Inc., Pittsburgh, Pa., has completed the acquisition from Litton Industries Inc. of the medical electronics business of Hellige GmbH, based in Freiberg, West Germany, and certain of the assets of Datamedix in Sharon, Mass., a distributor of the Hellige and other medical diagnostic devices.

PPG expects to complete soon the acquisition of certain interests of Honeywell, Inc., as announced at a press conference near the United Nations headquarters in New York a month ago.

Precision Aerotech Offering 1 Million Shares

Precision Aerotech, Inc., has filed with Securities & Exchange Commission for an initial public offering of 1 million shares of common stock, of which 900,000 will be sold by the company and 100,000 by certain selling shareholders. Net proceeds will be used to repay bank debt and assumed to make acquisitions. Application has been made to list the shares on the New York Stock Exchange.

Procter & Gamble Selling South African Company

Procter & Gamble Company, Cincinnati, Ohio, has agreed to sell the South African operating unit of its Richardson-Vicks Incorporated subsidiary to Whelk Investments Pty. Ltd., a company recently formed by Richardson-Vicks' local South African management.

In the 1985-1989 fiscal year, the South African operation had sales of about \$12 million and earnings of about \$250,000, producing and marketing a number of health and personal care products from a facility near Johannesburg. Earlier this year, P&G sold RVI's home care products unit — primarily Formby's products for furniture care — and the Mill Creek line of hair and skin care products.

Schering-Plough to Resume Capital Stock Purchases

With completion of the acquisition of Key Pharmaceuticals Inc., Schering-Plough Corporation is reconstituting a plan to purchase a maximum of \$300 million worth of its capital stock, of which there are now 82 million outstanding shares. Robert P. Luciano, chairman and chief executive officer, laid a meeting of British financial analysts and portfolio managers in London.

Capital expenditures will total about \$120 million this year, having eased from a peak of \$180 million in 1982, Mr. Luciano noted. Expenditures next year will be at the same level, but this will include about \$10 million for Key, which was not in the full-year 1985 budget.

Newmont Recapitalizing Magma Copper Subsidiary

Newmont Mining Corporation, the New York-based diversified producer of gold and other metals, has adopted a plan to recapitalize a wholly-owned subsidiary, Magma Copper Company, by contributing to the company's capital the stock of another 100 percent owned subsidiary — Pinto Valley Copper Corporation, and all but \$100 million of intercompany debt.

This restructuring will allow Magma Copper to raise the funds needed for a major retrofit and expansion of Magma's Arizona smelter and an expansion of its refinery, and for an anticipated in-situ oxide ore leaching project.

Under the plan, 90 percent of Magma's common stock will be distributed as a special dividend of Newmont shareholders after Magma has arranged the smelter-related financing, said Gordon R. Parker, chairman of Newmont.

Church & Dwight Buying Veterinary Business

Church & Dwight Company, Princeton, N.J., is expanding its agricultural business by filing a letter of intent to acquire the stock and assets of National Vitamin Products Company, Minneapolis, Minn., from the Stanchfield family.

National Vitamin produces milk-based products for the dairy herd replacement, veal, lamb, borsa and specialty markets, and is the third largest supplier of milk replacers to the dairy herd replacement market.

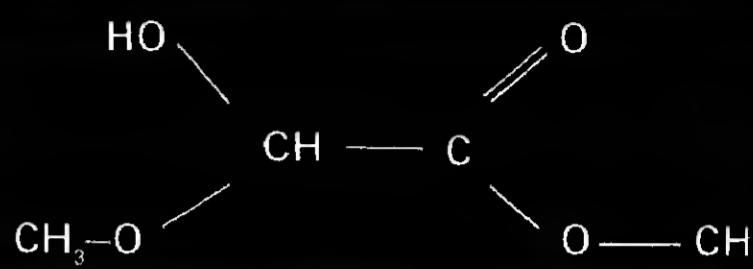
Pharmacia Raising Stake in Electro-Nucleonics

Pharmacia Inc., Uppsala, Sweden, has signed a contract to acquire 470,000 shares of the outstanding common stock of Electro-Nucleonics Inc. Together with Pharmacia's existing ownership of 250,000 ENI shares, this will bring the Swedish company's interest in ENI to approximately 16 percent. Pharmacia has the right to increase the holdings to 20 percent.

Hoechst High Chem

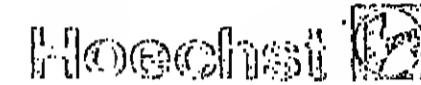
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Salsbury Unit Changes Name

The custom chemicals manufacturing unit of Salsbury Laboratories will be known as Salsbury Chemicals. It was announced last week. Along with the name change, an expanded marketing services organization has been implemented.

"Salsbury will be able to work more closely with basic chemicals manufacturers. We have set up three regional offices for the Northeast, the Midwest and by year-end will have an office to serve the Southeast," says John Pezzanite, the new director of marketing for Salsbury Chemicals.

"All of our regional marketing managers have technical degrees and have worked in research, process development and tech service. We believe these experience backgrounds will allow Salsbury to work with major firms in developing special chemistry

for new product intermediates and allow us to offer the medium-size producer complete formulation development and manufacturing," Mr. Pezzanite added.

Salsbury is also expanding Charles City headquarters staffing in its commercial development unit.

Robert Lerner, our new manager of Commercial Development, is a recognized authority in fine chemicals development and holds a dozen patents with a similar number of patents pending.

His team will be a major process development source for our customers. With our new in-field technical marketing and expanded developmental services program, Salsbury expects to further its capability to serve the chemicals manufacturer," observes Pezzanite.

Salsbury Chemicals also reported a major volume growth in its manufactured products based on aromatic nitration chemistry. A Fortune 500 firm has given the company a major contract for a new nitration intermediate and a medium-size end-user has signed

a multi-year contract for a specialty nitration formulation. Nitration chemistry is highly reactive and can be explosive.

Salsbury Laboratories is the animal health subsidiary of Solvay America and markets proprietary veterinary and animal health products in 90 countries.

Nat'l Distillers Wins High Rating

Mabon, Nugent & Co. is rating the shares of National Distillers & Chemical Corporation as attractive (the second highest rating) in the wake of National Distillers' announcement that it will acquire the ethylene, ethylene oxide and polyethylene business of Enron Corporation and sell its own liquor business.

"In later years, management may be faulted for making a mistake in judgment

regarding polyethylene, but management can no longer be viewed as sleepy," said Robert Reizes, Mabon, Nugent's chemical analyst in a recent report.

After the acquisition, National Distillers will have approximately 3.4 billion pounds polyethylene capacity, 230 million pounds polypropylene capacity, 1.7 billion pounds ethylene, 300 million pounds propylene, 200 million pounds of ethylene glycol, Reizes noted.

National Distillers now has about 20 percent of US polyethylene capacity, the analyst adds. The four largest producers — Nat'l Distillers, Dow Chemical Company, U.S. Gypsum Corporation and E.I. du Pont de Nemours & Co. — control 55 percent of market, he notes.

"We believe these companies will attempt to keep prices up. In our judgment, the situation will provide increased pricing stability in the polyethylene market," Mr. Reizes said.

In propane, National Distillers is involved heavily, and Mr. Reizes believes the company will continue to acquire propane distributors over the next several years. Propane margins vary substantially between wholesalers and retailers, but the average return for all of these businesses appears to be 18 to 20 percent, it is noted.

The Mabon Nugent chemical analyst believes polyethylene earnings should be from personnel rationalization, economies of scale, lower freight costs and reduction in total research and development. He estimates that these savings could be from \$20 million to \$30 million by 1988 at cents per share. To be conservative, Mr. Reizes has not included these potential savings in his earnings projections.

Those projections are \$3.85 per share in 1987, following a projected \$2.35 per share this year, and \$5.25 in 1988. Other factors helping these earnings are lower tax rate, the termination of a high gas contract in 1987, significantly expanded polyethylene and propane capacities, projected tightness of supply for ethylene.

A major domestic supplier conveys that its sales have largely increased this year, and that "there is pressure being put on manufacturers" for more product. Others share similar scenarios. However, while all surveyed attest to rising demand, some players cite additional reasons. For example, a major importer, who says his company is "more or less sold out" of caffeine, claims that a poor Brazilian coffee bean harvest is hurting the industry. Caffeine is often extracted from coffee beans.

SEVERE DROUGHT

Figures from the Coffee Information Institute, in New York, show that an estimated 11.2 million bags of coffee beans will be produced in Brazil this year, considerably down from 1986's 30 million bags. A bag is 60 kilograms (132 pounds). A spokesman says that production is down because of a severe drought, and that the updated 1986 estimate (made in September) is a decrease from the original estimate of 15 to 16 million bags.

Another importer, who imports Chinese material, says that his company is beginning to have trouble satisfying customers because demand in China is rising, and he thinks the Chinese will become more conservative in exporting their caffeine. Overall imports are down through July,

DRUGS & FINE CHEMICALS

Caffeine Demand, Price Rising; Customers Complain of Shortages

Tightening supplies have pushed caffeine pricing higher during 1986, and some players claim that hand-to-mouth sales are the rule rather than the exception. Other players, while acknowledging shrinking supplies, do not characterize the situation as being that serious.

Synthetic caffeine is priced between \$4.55 and \$4.95 per pound. Natural caffeine is priced similarly. At the beginning of the year, caffeine's price ranged from about \$4.30 to \$4.50 per pound. Sources expect more firming, and one comments that the \$6-per-pound mark may be reached, and passed, in the near future. "Prices probably will be drastically increased in 1987," says this source.

Synthetic-caffeine suppliers note that activity has increased for natural caffeine, and that when natural supplies are tight, some purchasers turn to the synthetic product, thereby diminishing those supplies as well. Generally, the pharmaceutical industry uses synthetic caffeine, while the beverage industry uses natural. This is not a hard-and-fast rule, though.

A major domestic supplier conveys that its sales have largely increased this year, and that "there is pressure being put on manufacturers" for more product. Others share similar scenarios. However, while all surveyed attest to rising demand, some players cite additional reasons. For example, a major importer, who says his company is "more or less sold out" of caffeine, claims that a poor Brazilian coffee bean harvest is hurting the industry. Caffeine is often extracted from coffee beans.

One buyer laments, "If I weren't a customer of (a large supplier), I wouldn't be able to get it." The buyer confirms that prices are rising, and says he knows of other buyers having difficulty getting caffeine. "The market is going crazy," he says. "If you can get caffeine in the first place." Another buyer claims that he called companies for a price quotation, and was unable to obtain one, being told that no caffeine was available at the time.

One buyer says he has heard that two major soft drink manufacturers are buying large amounts of both natural and synthetic caffeine, making the situation even tougher for other buyers. Suppliers have no comment.

The industry is showing interest in a new soft drink called "Jolt Cola." Billed by its makers as having "All the sugar and twice the caffeine," it has received some national attention. A company spokesman says the product was introduced in April, and is currently available in 17 states. By the end of October, though, 35 states will be selling the

DRUG & FINE CHEMICAL IMPORTS: JULY

CENSUS BUREAU REPORTS ON THE TOP DRUGS

| | JULY | | JUNE | |
|--|-----------|-----------|-----------|-----------|
| | QUANTITY | \$ VALUE | QUANTITY | \$ VALUE |
| Acetaminophen | 362,774 | \$93,828 | 880,282 | \$184,844 |
| Benzene drugs, n.a.p.i. | 1,422,780 | 2,133,732 | 1,373,000 | 2,177,368 |
| Brucine | 75,000 | 167,500 | 86,000 | 177,500 |
| Caffeine | 384,047 | 1,066,188 | 365,850 | 1,086,931 |
| Chloro Acid | 6,085,082 | 3,028,778 | 4,245,778 | 2,685,931 |
| Cream of Tartar | 162,811 | 84,074 | 247,530 | 139,448 |
| d-pantethionic acid | 482,685 | 1,588,291 | 435,728 | 1,420,608 |
| Iodine, crude | 143,485 | 529,133 | 108,028 | 302,254 |
| Monosodium glutamate | 6,722,198 | \$872,441 | 7,281,118 | 3,068,485 |
| Niacin, pharmaceutical grade | 143,88 | 322,198 | 98,207 | 214,383 |
| Penicillin G salts | 126,208 | 1,847,517 | 151,544 | 1,010,828 |
| Penicillin n.a.p.i. | 5,782 | 1,225,412 | 16,012 | 1,086,548 |
| Phenylephrine HCl | 40,800 | 36,201 | 85,016 | 56,606 |
| Potassium sodium tartrate, (Rochelle Salt) | 177,818 | 628,808 | 425,585 | 1,309,033 |
| Quinidine | 71,420 | 162,160 | 110,864 | 230,008 |
| Quinine and its salts | 80,274 | 180,831 | 146,008 | 313,380 |
| Saccharin | 2,668,589 | 1,773,018 | 738,498 | 407,332 |
| Steroid hormones, synthetic | 130,282 | 658,802 | 186,679 | 783,711 |
| Sulfamethoxine | 141,315 | 316,675 | 31,340 | 143,220 |
| Sulfathiazole | 547,070 | 620,023 | 325,261 | 332,316 |
| Spiramic Acid | 421,898 | 2,826,461 | 378,712 | 2,800,404 |
| Vitamin A | 83,680 | 643,728 | 59,928 | 780,045 |
| Vitamin B ₁ | 118,300 | 1,088,664 | 231,748 | 3,054,880 |
| Vitamin B ₂ | 66,332 | 850,000 | 13,883 | 601,044 |
| Vitamin C | 1,424,513 | 4,015,837 | 1,428,043 | 4,282,485 |
| Vitamin E | 458,785 | 9,385,184 | 271,510 | 1,246,476 |
| Vitamins, provitamin, etc., n.a.p.i. | 133,338 | 863,634 | 61,612 | 186,021 |
| Woolgrease, n.a.p.i. | 626,255 | 260,301 | 960,102 | 607,271 |



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CHEMICAL MARKETING REPORTER

October 6, 1985

DRUGS & FINE CHEMS

cola. Caffeine suppliers say they are curious about the cola, and will examine its growth.

Coinciding with market tightness is an apparent stabilization, or decline, of decaffeinated coffee consumption in the US. The International Coffee Organization, in London, says that consumption of decaffeinated coffee actually decreased this year, according to estimates. A spokeswoman says 7.1 percent of regular coffee drinkers drink decaffeinated coffee. This percentage was 7.3 percent in 1984.

Nineteen eighty six marks the second consecutive year that the total has fallen. In 1984, the percentage was 17.7 percent. The year before that, however, ICO estimated that 15.3 percent drank decaffeinated coffee. The spokeswoman said that rapid or steady annual increases were the norm until 1984.

ESTROGEN — Questions have been raised about the overall efficiency of a new estrogen skin patch developed by Ciba Geigy (CMR, 9/2/86, p. 9). The questions have been raised by Ayerst, which sells an oral-dosage

Ciba Geigy's product, used twice weekly for three-and-one-half days at a time, is placed on the abdomen. This method allows estrogen to bypass the liver, which, according

to Ciba Geigy, helps avoid metabolism problems. The company also boasts that its estrogen form, 17-heta estradiol, closely mimics woman's natural estrogens before menopause.

Ayerst says that while the new technology is interesting, it worries the public may be misled about its potential. Primarily, Ayerst argues that the patch is not indicated for osteoporosis, while oral dosage forms are. Among the company's other arguments is that Food & Drug Administration classifies the patch as "J-C," meaning it is not regarded as a significant advance in therapy.

Ciba Geigy acknowledges these points, counters that it did not intend to strive for several indications, because of lengthy FDA investigations, and claims that studies are being done to perfect dosage levels for treating osteoporosis. "That just takes time," says a spokesman. He adds that "Ayerst is highlighting their high points, we highlight ours."

MONOSODIUM GLUTAMATE — Mira Co., of South Korea, is raising its export price for MSG by 7 to 8 percent, the company says.

Cheil Sugar Company, another South Korean source of MSG, announced a similar increase in exports to the US three weeks ago (CMR, 9/22/86, p. 22).

A Miryo spokesman says prices were increased because of increased manufacturing costs, and because of the US dollar's strength against the South Korean currency, he says.

The sale includes Monsanto's Seattle, Wash., plant where vanillin has been manufactured since 1952. Rhone-Poulenc plans to continue production and sale of vanillin and substantially all workers at the Seattle plant are expected to be offered employment.

Monsanto's vanillin plant at Seattle is rated at over 2,000 tons of capacity annually.

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Monsanto Sells Chemical Unit

Monsanto Company last week said it sold its paper chemicals business to a unit of Akzo N.V. The terms of the transaction were not disclosed.

Akzo gets the rights to some Monsanto patents and technology as well as the "Mersize" and "Monsize" paper sizing agent trademarks. Included in the sale are Monsanto's wholly-owned subsidiary FRP Company, with principal manufacturing facilities at Baxley, Ga., and paper chemical assets at Nitro, West Va., and LaSalle, Que., Canada.

Monsanto's "Polygrasp" resins ("Scriptet") paper coatings and specialty chemical coating resin operations are not part of this transaction.

Ayerst, however, will become a manufacturer's representative for Monsanto for sales of "Scriptet" to the paper industry.

In another divestment during the week, Monsanto sold its vanillin business to Rhone-Poulenc, Inc.

Roger F. Sellew, commercial director of the detergents division at Monsanto, said, "We have been operating vanillin at a reasonable profit, but it is a specialty business that is not strategic with the division's major emphasis on detergent materials and food phosphates and acidulants."

The sale includes Monsanto's Seattle, Wash., plant where vanillin has been manufactured since 1952. Rhone-Poulenc plans to continue production and sale of vanillin and substantially all workers at the Seattle plant are expected to be offered employment.

Monsanto's vanillin plant at Seattle is rated at over 2,000 tons of capacity annually.

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CHEMICAL MARKETING REPORTER

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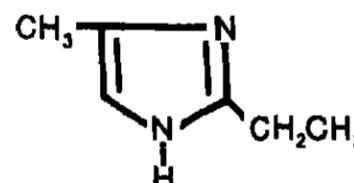
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Superfund Tax

Continued from Page 3

negotiators reluctantly agreed to substantially higher taxes on the oil industry, but only after the House accepted a "tax differential" favoring domestic crude oil producers.

Under the plan, imported oil would be taxed at the rate of 1.7 cents per barrel to raise \$1.5 billion over the five-year period. US producers would pay \$1.2 billion, taxed at the rate of 7.8 cents per barrel.

But as the only \$200 million in the original superfund, the American Petroleum Institute called the massive increase "totally unjustified and unfair."

"The record is clear that six thousand companies from every industry, as well as local, state and Federal governments, have contributed to waste sites, and the petroleum industry's share is very small," the institute says.

"Yet, under this proposal, this single industry would be burdened with costs as high as all the rest of industry combined."

The CMA spokesman notes that the chemical industry would pick up about 20 percent of the oil industry's tab. "We're going to end up paying a lot more overall because we'll pay a big part of the oil tax — oil being a chemical industry feedstock," he says.

Rep. Downey, however, described the final proposal as a "classic compromise," noting that House members had hoped for a heavier assessment against chemical companies, the Senate had initially approved a higher broad-based tax, and oil state lawmakers had lobbied to ease the burden on petroleum producers.

Work on the sites has continued on a scaled-down basis since then, financial money left over from the program's first year and by emergency funds appropriated by Congress.

The tax agreement also came one day after EPA told contractors at 104 of the nation's worst toxic dumps it was canceling contracts at the end of the month because of a lack of superfund money.

taxes on petroleum or imposed a new tax across the manufacturing sector. Thursday, a spokesman for the Treasury department said, "The proposal is such that the Secretary of the Treasury will be unable to recommend that the President sign the measure."

He also criticized the conference's adoption of a tax differential for foreign and domestic oil. "This is the equivalent of an oil import fee, which this administration opposes," a official said.

"The vetoarians are heating loudly," says Sen. Frank Lautenberg (D-N.J.). "But before the President takes such an action he should think carefully about the ramifications of a veto. A veto would starve this program possibly kill it."

He points out that due to the upcoming adjournment of Congress, there will be no chance for a veto override.

"The message to the President is clear," says the Senator. "Both houses of Congress approved superfund by overwhelming margins. If there is a veto, the President just steps with the country."

The tax agreement came one year after Congress missed the deadline to renew taxing authority for the government's most ambitious anti-pollution program.

Technically, superfund expired Sept. 1, 1985, and EPA lost its authority to collect taxes from the petrochemical industry to finance the cleanup of some of the nation's most hazardous waste sites.

While all parties involved in the three-year reauthorization fight expressed relief that a compromise had finally been reached, they acknowledged that a presidential veto is a distinct possibility.

Treasury Secretary James Baker warned last summer he would recommend a veto of any superfund bill that significantly increase

Agent Orange 'Breakthrough' Claimed in N.J.

The New Jersey Agent Orange Commission released details of a study they say provides "a major scientific breakthrough" in determining exposure of Vietnam War veterans to the toxic herbicide dioxin.

Allen E. Falk, commission chairman, says the results of the study "will re-open the Agent Orange issue" and the findings promise to provide answers to veterans and their families about the extent of their exposure to dioxin.

"It means that the victims of dioxin exposure at Times Beach, Mo., can one day measure the level of exposure they received. It means the factory worker in Johnstown, Pa., can one day determine if the toxic chemicals she works with everyday are in her bloodstream," he said.

Rep. Tom Daschle (D-D.S.) said that if the findings of the New Jersey study are verified, "... they could allow us, for the first time, to conclusively identify veterans exposed to Agent Orange and, therefore, to make judgments about its effects. That is a critical first step."

A lawsuit filed against seven Agent Orange manufacturers by veterans from the U.S., Australia and New Zealand resulted in a \$200 million settlement in 1984. The litigation, currently under appeal, included 245,000 claims of health damage.

At a Capitol Hill news conference, scientists said the new research shows for the first time a biological "fingerprint" left in veterans' blood by dioxin.

"We have found a method which can precisely show the levels of the dioxin isomer used in Agent Orange, today, some 15 to 20 years after exposure, in the blood and fat tissue of Vietnam veterans," says Mr. Falk.

Furthermore, he says, he tests found levels of dioxin 10 times higher in heavily exposed veterans than in other Vietnam-era servicemen.

However, Mr. Falk acknowledges the research on 10 highly exposed veterans stops short of linking their medical problems directly to the chemical.

But the results of the research, he adds,

should prompt the Federal government to drop its claim that Congressionally-mandated studies examining the possible link between exposure and disabilities cannot be completed because of a lack of a means to determine exposure.

The 10 highly exposed veterans were studied along with 17 "control" cases, including veterans who served in Vietnam without direct Agent Orange exposure, and veterans of the area who did not serve in Southeast Asia.

Levels of dioxin (2, 3, 7, 8-tetrachlorodibenzo-p-dioxin) averaged about 48 parts per trillion in exposed veterans, compared to about 4 or 5 ppt in those who saw no Vietnam service, said toxicologist Ralph Fogelman.

"The implications this finding may have on toxic liability cases is mind-boggling," says Rep. Bob Edgar (D-Pa.), chairman of the House Veteran Affairs subcommittee on health care.

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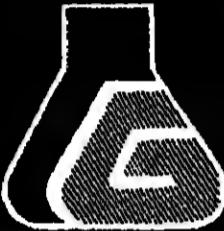
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US Fertilizers Score Victory On Ex-Im Loans

Congressional passage last week of a measure restricting Export-Import Bank loans to certain foreign competitors represents a major victory for the US economy, according to Gary D. Myers, president of The Fertilizer Institute, a key backer of the legislation.

An amendment to the congressionally approved Eximbank reauthorization package bars the use of Eximbank funds to establish or expand production of another nation's export commodities if such products are in world surplus, if they compete directly with similar US products, or if such loan assistance would cause substantial injury to US producers.

The language, referred to as the Byrd Amendment because of the strong support by Sen. Robert Byrd (D-W. Va.), is part of the Eximbank reauthorization bill awaiting President Reagan's signature.

Prior to final congressional passage, Sen. Byrd singled out the Fertilizer Institute as having provided convincing information about the damage to US industry of past Eximbank loans.

Mr. Myers praised the bill's passage, which he said is "good news for US phosphate producers." This industry segment has claimed large export sales declines due to Eximbank support of North African phosphate producers.

He said that \$200 million in Eximbank loans to those producers from 1979 to 1985 equalled a single year's loss of \$200 million in market share for US phosphate makers and a \$450 million drop in domestic employment income.

"This amendment will help slow the dam-

age done to our phosphate producers and their employees," Mr. Myers said.

The Fertilizer Institute represents, by voluntary membership, more than 90 percent of the nation's fertilizer industry. Producers, manufacturers, retailers, trading firms, and equipment manufacturers who comprise its membership are served by a full-time Washington, D.C., staff in various legislative, educational and technical areas, as well as with information and public relations programs.

Alachlor Wins Partial Reprieve But Is Limited

Environmental Protection Agency has decided not to suspend the use of alachlor, the nation's most widely used herbicide, but the agency last week proposed additional restrictions, including a requirement that use be limited to certified applicators and that new label modifications be made on the products.

EPA has been reconsidering its approval of alachlor, which is used to protect corn, soybeans, peanuts and other crops from weeds, because it has been found to cause cancer in laboratory test animals. The agency considers alachlor to be a potential human carcinogen.

Monsanto Chemical Company produces about 84 million pounds of the chemical, trade-named "Lasso," for US farm consumption annually.

A company spokesman says Monsanto is satisfied with the decision and adds that 75 percent of "Lasso" users are already certified. "We've said for two years that the special review would uphold the use of our product and it does that," he remarked.

"This amendment will help slow the dam-

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PERFUMES & FLAVORINGS

Black Pepper Prices Firming As the World Market Tightens

Black pepper spot prices shot up across the board last week to \$2.17 per pound. Predictions from a year ago of a tightening global market proved true as both the Indonesian and Brazilian crops registered smaller harvests.

"It's been a bullish market," says a spice broker. "Twelve to eighteen months ago a worldwide shortage was predicted by the major suppliers in black pepper."

Also behind the higher prices, says a peper importer, is the anticipation of even shorter supplies: "Buying has increased so that future contract requirements can be filled at present prices. Though prices are high, they're covering themselves in case they go higher."

All four major points of origin, Indonesia, Brazil, India and Malaysia, are in a seasonal rotation where each one will record a lower harvest.

Indonesia's late summer harvest totalled 8,000 tons, down from an annual average of 14,000 to 16,000 tons. In view of the shortage, says another spice broker, "the Indonesians are in no rush to sell the balance of their recent crop," hoping to hold out for higher prices later in the year.

The Brazilian harvest of August through October, reports a trade source, has been late, further tightening the market. A spice importer relates a climate similar to Indonesia's in Brazil: "Brazilian farmers also planted lower crops and are holding on to their material; they, too, are unwilling to sell it for a low price." The farmers have more money than they did last year," adds an industry observer, "so they can afford to hold out longer." Crop estimates for Brazilian black pepper are from 20,000 to 22,000 tons, compared to an average of 30,000 tons.

STRONG INDIAN CROP

India's upcoming harvest of December and January is expected to be a good one, ranging from 45,000 to 50,000 tons. It will be a decrease from India's record crop of last year, 65,000 tons, but well above the Indian average of 35,000 to 38,000 tons.

Yet another pepper importer contends a storage of Indian material may emerge because of seasonal timing. "The old crop India black pepper has almost been exhausted," he says, "and the December/January harvest is a long way off."

A spice broker concurs, citing East European and Russian purchases of Indian black pepper: "India's position has been pushed up by steady sales to the Eastern bloc, on the order of 500 to 700 tons per week. Because the form of payment is less desirable to the Indians — credits for farm equipment and other machinery versus hard currency from the West — the price these nations pay is 2 percent to 10 percent higher, causing the Indian market to firm."

To complete the picture, the Malaysian Spring, 1986 crop was 15,000 tons, half of its yearly average of 30,000 tons. No precise estimates for Malaysia's 1987 crop were available, but sources agree that it ought to be larger than last Spring's.

The effect of this bullish market on US buyers, according to a pepper broker, is a more conservative approach to contracts. In contrast to two to three years ago, he says, "US buyers are less likely to book long positions because the price swings are too great. They now prefer to go hand-to-mouth and avoid a gambling loss."

Reviewing demand statistics from recent years, an industry analyst expects a Winter shortage: "The first few months of next year black pepper will be in very short supply."

A spice broker emphasizes that the pepper cycle insures availability and that the market can absorb any temporary shortage. "We should see this range — \$1.80 to \$2.50 per pound — through most of 1987."

In the long term, this broker sees the world black pepper farmers overcompensating for

the shortage. "What will happen eventually is that in two years or so there will be an overabundance of pepper and the prices will come crashing down."

In contrast to the black pepper market, white pepper has been quiet, losing 2 cents last week to \$2.08 per pound. Europe, the largest consumer market, has been inactive,

as are the major suppliers in black pepper."

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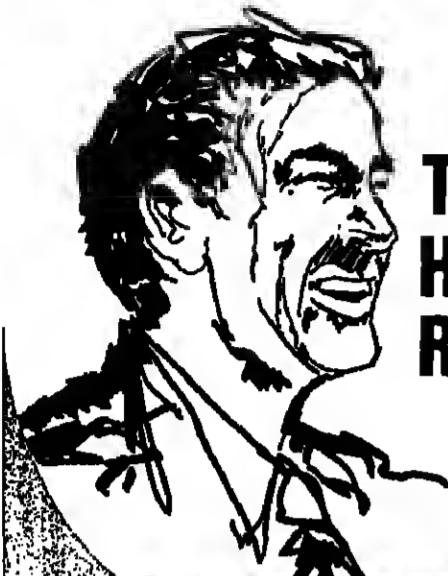
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October 6, 1986

HEAVY CHEMICALS

bonate will increase to \$23.55 per hundred-weight from \$22.05; dialysate grade material will increase to \$17.95 per hundredweight from \$17.20.

Church & Dwight says the hike of approximately 3 percent is due to increases in the cost of raw material soda ash as well as increases in raw material freight costs. Also cited are rising costs related to packaging and labor.

SODIUM CHLORATE — ERCO, a division of Temenco Canada Inc., is announcing a price increase for sodium chlorate from its North Vancouver, B.C. plant. The increases are effective immediately.

The new prices, in Canadian dollars, are as follows: sodium chlorate in bulk will be \$580 per metric ton; sodium chlorate generator feed liquor, \$543 per metric ton; R2/R3 solution, \$543 per metric ton plus \$50 per metric ton for added salt. All products are f.o.b. North Vancouver and freight equalized. These represent \$20-per-metric-ton increases.

Pulp and Paper accounts will continue to receive a \$20-per-metric-ton discount, bringing their prices to \$540 for crystal and \$523 for solutions.

Product in Flexible Intermediate Bulk Containers (FIBCs) and drums will also be increased by \$20 per metric ton.

Last month, ERCO removed temporary voluntary allowances for crystal sodium chlorate shipped from its Buckingham, Quebec plant (CMR, 9/15/86, pg. 30).

VANADIUM OXYTRICHLORIDE — Stauffer Chemical Company says it is increasing the price of its vanadium oxytrichloride, effective November 1. Bulk shipments will move to \$4.95 per pound from \$4.55 per pound; product in cylinders will increase to \$5.25 per pound from \$4.75 per pound. Both prices are f.o.b. Weston, Mich.

Stauffer says the hike is necessary to cover increases in the cost of vanadium metal due to worldwide tightening of vanadium metal supplies. Foote Mineral Company announced a similar increase earlier this year (CMR, 6/30/86, pg. 23).

Newmont Spinoff

Newmont Mining Corporation is spinning off 60 percent of its copper operations to shareholders. The company will retain a 15 percent interest in the new company, to be called Magma Copper Company, and the remaining 5 percent will be held by Magma management. The spinoff is expected to be completed in January.

The agency will require the protective clothing and equipment whenever high concentrations of vapors might be expected in mixing/loading or application.

EPA will continue to use the current reentry level of 72 hours until data are submitted to support a final interval. In most cases, the agency would set a reentry interval of 24 hours, during which time reentry

is required.

The agency said its examination of monitoring data shows that the risk of cancer from alachlor levels in drinking water sources supplied by surface water will not generally exceed two persons in one million — an acceptable risk which does not merit regulation.

PROPOSAL PLANNED

EPA's Office of Drinking Water plans to propose a Maximum Contaminant Level (MCL) for alachlor under the Safe Drinking Water Act in the near future. These regulations would require the treatment of drinking water which contains alachlor residues in excess of the MCL, thereby maintaining the level of risk from exposure at a reasonable level.

Some of the measured levels of alachlor may be higher than the MCL set by the agency, however. EPA is therefore soliciting public comment on measures which could be taken under FIFRA to reduce or prevent contamination of surface water by alachlor.

To reduce applicator risks to reasonable levels, the agency is proposing a number of conditions and label modifications to the alachlor registration. The product will be limited to certified applicators or persons under their direct supervision; aerial applications may be relabeled on the alachlor label with the proviso that human flaggers be prohibited and that only mechanical flaggers may be used; the use of a closed mixing/loading system is required for all applicators who treat 300 acres or more annually with alachlor.

The following statements must appear on alachlor product labels: "Restricted use due to oncogenicity"; "The use of this product may be hazardous to your health" and "This product contains alachlor which has been determined to cause tumors in laboratory animals."

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EPA to Label Dow Pesticide A Cancer Threat

Environmental Protection Agency has begun a special review of the Dow Chemical Company pesticide 1,3-dichloropropene after determining that it has potential for producing tumors (oncogenicity) in humans.

Sold under the trade names "Telone II" and "Dow Telone," 1,3-dichloropropene is registered for use as a soil fumigant for cotton, potatoes, tobacco, sugar beets, grain, nut-trees, bush, vines and turf.

EPA has classified it as a probable human carcinogen and says available chronic toxicity data show that the chemical is oncogenic at multiple sites in both sexes of mice and rats.

According to the agency, other data show 1,3-dichloropropene to be a direct acting mutagen and to have a structural similarity to other known oncogens, such as vinyl chloride, that produce similar types of tumors in rats.

Based on its review of available data, EPA says it will require a cancer hazard warning statement on all product labels. The agency is also classifying 1,3-dichloropropene products for "restricted use" by certified applicators.

EPA says it believes that restricted use is necessary to protect mixers/Handlers and applicators from exposure through inhalation.

Dow says it is not aware of any undue harm to the environment or humans as result of the pesticide's use, and adds that according to its data, the product achieves effective results with a minimum of risk. The company says it believes EPA's review will indicate that the benefits outweigh the risks of 1,3-dichloropropene's continued use.

EPA is continuing to require protective clothing and equipment specified on existing labeling. The types of protective clothing and equipment required include clean body covering, gloves, heavy-duty footwear, safety goggles and a mask or respirator approved for use with 1,3-dichloropropene.

The agency will require the protective clothing and equipment whenever high concentrations of vapors might be expected in mixing/loading or application.

EPA will continue to use the current reentry level of 72 hours until data are submitted to support a final interval. In most cases, the agency would set a reentry interval of 24 hours, during which time reentry

into treated areas is prohibited without protective clothing. However, because 1,3-dichloropropene is extremely hazardous, the product is currently labeled with a 72-hour interval.

The agency is requiring environmental fate data, including a protocol for monitoring studies to determine the potential for groundwater contamination. Available data indicate that the chemical does leach to groundwater when it is present in areas with shallow groundwater, sandy soils of low percentage organic matter and high rainfall or irrigation.

EPA will not impose warning statements on product labels for non-target aquatic organisms and endangered species until the environmental fate data are received and reviewed. 1,3-dichloropropene is of low to moderate toxicity to waterfowl and upland game birds. It is moderately toxic to coldwater and warmwater fish and freshwater invertebrates.

While the data gaps are being filled, currently registered products containing 1,3-dichloropropene as the sole active ingredient may be sold, distributed, formulated and used subject to the conditions EPA has specified. Registrants must provide or agree to provide additional data to maintain existing registrations. The agency will review and evaluate these data to determine if additional regulatory changes are necessary.

EPA also said that the risks associated with alachlor exposure through groundwater cannot be adequately addressed based on available data.

TOUGHER RESTRICTIONS

The agency's office of drinking water was in favor of tougher restrictions on the chemical's use, arguing that concentrations of alachlor as high as 580 parts per billion had been detected in some groundwater samples.

But in supporting the judgement of the office of pesticide programs, top EPA officials took the position that further monitoring will be needed before additional restrictions can be considered as a result of the chemical's widespread use and the lack of statistically representative data.

Currently, several groundwater and soil leaching studies are being conducted by Monsanto, various states, the Agriculture Department and the US Geological Survey.

"As a result," said EPA, "a decision on whether to regulate alachlor based on groundwater concerns will be delayed until the agency reaches a final position on the regulation of this product, expected in about one year."

The agency said its examination of monitoring data shows that the risk of cancer from alachlor levels in drinking water sources supplied by surface water will not generally exceed two persons in one million — an acceptable risk which does not merit regulation.

PROPOSAL PLANNED

EPA's Office of Drinking Water plans to propose a Maximum Contaminant Level (MCL) for alachlor under the Safe Drinking Water Act in the near future. These regulations would require the treatment of drinking water which contains alachlor residues in excess of the MCL, thereby maintaining the level of risk from exposure at a reasonable level.

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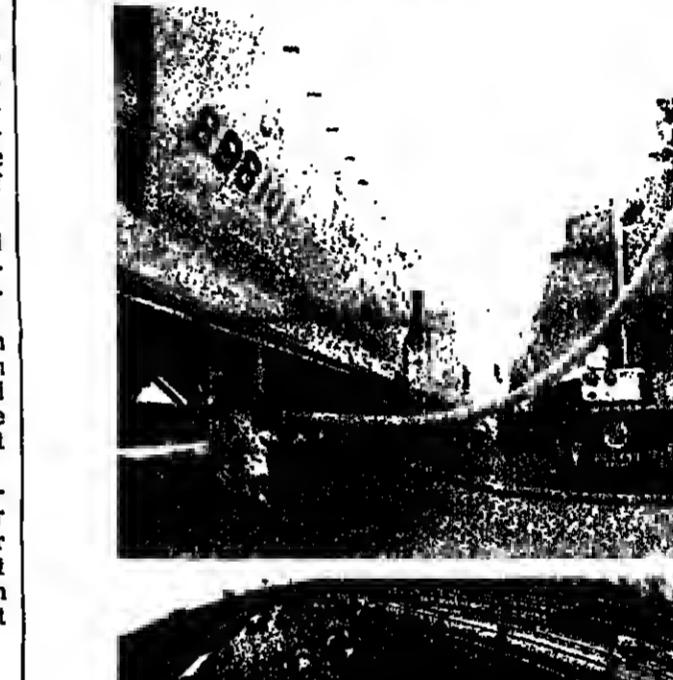
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The Netherlands
Tel: 31-70-408-408
Cable: EUROBRO, Telex: 32137

In Japan contact:
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2

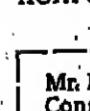
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CHEMICAL MARKETING REPORTER

October 6, 1986

October 6, 1986

CHEMICAL MARKETING REPORTER

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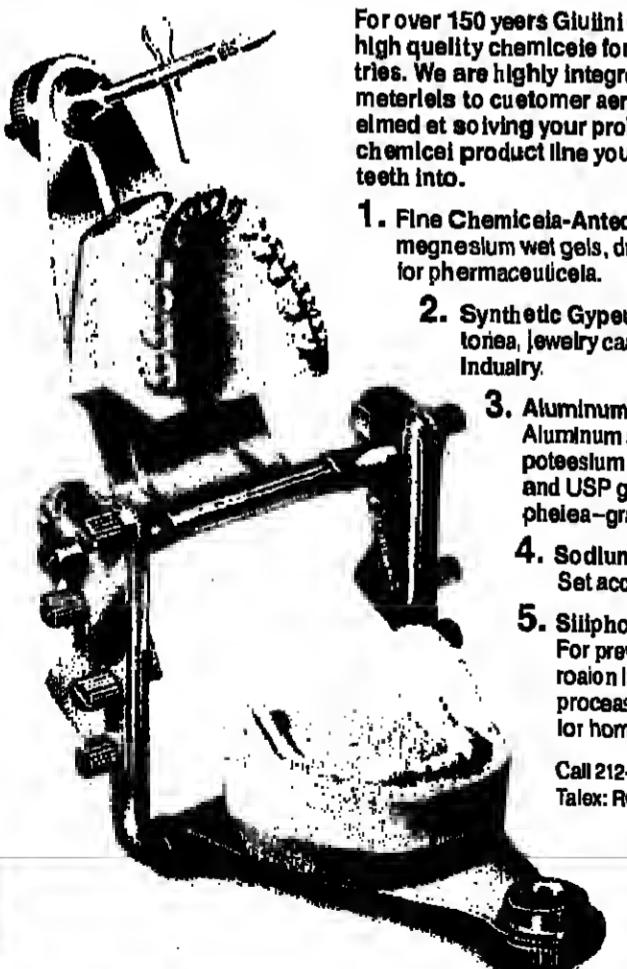
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CHEMICAL MARKETING REPORTER

October 6, 1986

Chemical Pricing

Continued from Page p 7

cents per pound September 1, and are doing so again one month later. Strong worldwide demand for polystyrene is said to be providing support for the higher pricing. With operating rates approaching 80 percent, producers say the market has become considerably tighter than might have been expected a year ago, and that profitability has been returning to the industry.

Cumene pricing has risen from 13½ cents per pound in mid-Summer to 14½ cents per pound in September, with some suppliers reportedly aiming at 15 cents per pound or higher in October. This movement prompted phenol producers to schedule a 2-cent-per-pound price increase for October 1.

Margins have reportedly been weak in the phenol business for much of the year, and a price initiative at the beginning of the third quarter did not succeed. Although demand from the phenolic resin end market has not reflected the level of housing construction this year, producers are hopeful that a healthy rate of growth for bisphenol-A will provide support for this month's price increase.

CYCLOHEXANE PRICES

Cyclohexane producers are raising prices 1 cent per pound October 1. The change involves a reduction of the industry-wide temporary voluntary allowance, which, when granted last year at the behest of the nylon industry, was 4 cents per gallon, and now ranges from 1 cent to 2 cents per gallon.

Producers say that demand is healthy, and that, with the August shutdown of E.I. du Pont de Nemours & Co.'s Corpus Christi, Tex., plant for the balance of the year, inventories levels are modest.

Phthalic anhydride producers this month are raising prices by 1 cent to 2 cents per pound for both molten and flake material, citing high feedstock ortho-xylene costs and the need to improve margins. With all major end markets said to be strong, and with a vigorous demand for exports, the product is seen as fairly tight. A 2-cent-per-pound price increase was successful at the beginning of the third quarter.

The key word in aliphatics prices this year, is that a price hike would be successful, most dealers put in their bid for product.

Butadiene has not benefited from stronger oil values and remains under pressure from imports and oversupply. Prices during the year dropped by about 80 percent and material traded at 11½ cents per pound during October.

Methanol has also born the brunt of lower energy prices as feedstock natural gas has

as in all major organic chemicals, is off. Sharply lower crude oil prices at the beginning of the year sent purchasing agents scurrying for their share of lower raw material costs. Sellers are now trying to increase and/or stabilize prices on the strength of a moderate increase in crude oil pricing from 15 to 20 dollars per barrel low to approximately \$15 per barrel.

Ethylene prices have been revived from the 13 cent per pound low in July to a current level of 14 cents per pound. This has been achieved through strong demand, balanced supply and an insistence by producers that higher feed costs over the past six months have to be passed along.

In addition, ethylene suppliers are hoping to add as much as 2 cents per pound to current levels during October. As in the past, suppliers are optimistic about higher prices at the start of each quarter. However, over-supply and strong competition for customers has tended to disappoint most sellers. The fourth quarter of 1986 is measurably different, though. Supply and demand are in closer balance than they have been since the late 1970's and the October initiative comes on the heels of a small but significant advance during September.

Strong demand for polyethylene this year has also made propylene producers more adamant about seeking price increases.

Ethylene glycol has finished its major buying season for antifreeze raw materials in September with pricing of 18½ cents per pound and producers are looking for a 2-cent-per-pound hike for October 1. Buyers waited until the last minute to order their antifreeze materials. However, once it seemed likely that a price hike would be successful, most dealers put in their bid for product.

Butadiene has not benefited from stronger oil values and remains under pressure from imports and oversupply. Prices during the year dropped by about 80 percent and material traded at 11½ cents per pound during October.

Methanol has also born the brunt of lower energy prices as feedstock natural gas has

compete with liquid fuel. Gulf Coast material lost 3 cents to 4 cents per gallon during the quarter, but the outlook is for more stable pricing. Methanol values on the Gulf Coast now make it more difficult for overseas producers to market their material profitably in the US.

Producers of commodity plastics, facing strong demand and, with firming crude and petrochemical values, a more receptive pricing environment, are now trying to restore the profitability which faded with crude oil rates over the first half of the year. Virtually all major plastics producers announced price hikes for the fourth quarter.

LDPE pricing and demand eroded over the second quarter, as customers either held back on purchases, waiting for further drops in crude oil costs, or demanded pass-throughs of lower crude costs. A 5-cent-per-pound price increase, effective August 1, has gotten off to a slow start, but is expected to hold. HDPE prices, which slipped 3 to 4 percent over the second quarter due to competitive pricing and customer pressure, have started to firm. Producers feel that the 4-cent-per-pound increase effective October 1 has already taken effect.

Following zinc metal prices, zinc oxide tabs will also move up 3 cents per pound in October.

CADMUM PIGMENTS

Demand for cadmium pigments has been strong, due to increased use by makers of specialty engineering plastics. Several producers raised prices 2 percent this September.

In contrast, carbon black prices are still depressed, although feedstock tabs seem to be on the rise.

Likewise, iron oxide prices are said to be 10 percent lower than they were last year. Imports, which played a role in depressing domestic prices, seem to be waning, however. Magnetic grade production, which had moved almost entirely offshore, has returned to the US, as one major producer reopened a mothballed plant this summer.

Some semblance of profitability may finally return to the beleaguered US plasticizer industry: producers of phthalate adipate and other plasticizers hiked off-list prices by 2 cents per pound in July to combat price erosion and 15 to 20 percent increases in raw material costs.

INORGANIC CHEMICALS

For the most part, inorganic chemicals suffered in the third quarter, with fertilizers leading the way downhill. A few items managed to tick upwards, however.

Caustic soda continued its price slide during the quarter, and a July 1 price hike was virtually ignored by purchasers. Chlorine continued to carry the weight of the E.C.U. and gained about \$10 in July.

All producers have announced October 1 \$30-per-ton hikes on caustic soda alone. Most observers feel caustic has bottomed out for the year and that much of the increase will be implemented.

Chlorine is being left out of the October initial, but, observers say, chlorine prices have stayed firm since the July hike. Continued strength in the construction industry takes the credit for this.

Gulf coast prices for ammonia and urea are currently less than one-half their 1985 peak. Similarly, ammonium phosphate prices are, for most producers, below cash cost.

Phosphate producers are getting some relief as the export market is beginning to pick up, but nitrogen makers, inundated by Eastern European imports, have little to look forward to. An anti-dumping suit may offer some relief (see page 83).

A few items are managing gains. Sulfur dioxide producers have announced \$10 per ton hikes for October 1. The advance should go through, most feel, as it is the first in over two years.

PEROXIDE TIMES

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October 6, 1986

CHEMICAL MARKETING REPORTER

37

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COATINGS & PLASTICS

CD Polycarbonate

Continued from Page 9

million pounds, a spokesman for the firm reports. Mobay is currently the sole commercial supplier of resin to the joint venture, although all domestic polycarbonate producers have been working in conjunction with the firm on product development.

Although Mobay claims that its new plant will be the largest commercial facility in the US capable of producing CD-grade polycarbonates on a large-scale basis, all domestic producers, realizing the tremendous potential of this market segment, are currently involved in production.

General Electric's Plastics Group started commercial production of a competitive polycarbonate line, "Lexon" OQ, in the last quarter of 1985 at its Mount Vernon, Ind., polycarbonate facility, while Dow Chemical Company says it began commercial production of CD-quality "Caliber" polycarbonate resin at its Freeport, Tex., plant in July 1986.

RAPID MARKET GROWTH

The market for this grade of resin is expected to grow rapidly, as optical disk applications gain greater acceptance worldwide.

Total US CD-grade polycarbonate resin production is projected by one producer to move from its current level of about 300,000 pounds per year to between 20 and 50 million pounds per year in 1990.

Manufacture of CD's is expected to increase eightfold through 1990. Five million disks were produced in the US last year, and a capacity for 450 to 500 million disks is projected by 1990. Worldwide capacity by that time should be 1 billion disks per year.

As Mark Hindal, optical disk program specialist for G.E.'s Plastics Group explains, growth in this portion of the market will be pushed not only by audio CD's and read-only memory disks, but also by interactive storage disks, introduced by Sony and Philips this February. Each individual disk will combine video, audio and computer data and, used in applications such as multimedia encyclopedias.

Currently, compact audio disks are progressing the most rapidly as a market entity. Although acceptance of read-only storage disks and interactive disks will probably lag behind audio CD's by 4 to 5 years, producers feel that as magnetic tape data systems are replaced by this new technology, they will probably become the most important of the optical disk market segments by the late 1990's. Triple digit growth for these two market segments is expected through 1990.

Polycarbonate demand for audio applications should grow at an average rate of 20 percent annually through 1990. By that time, producers anticipate that domestic requirements will be entirely satisfied by US polycarbonate resin manufacturers.

Some data processing firms switched from

magnetic to optical disk data storage systems this year. In July, Filenet Corporation, a leading producer of storage and retrieval units, designed and marketed a disk unit using a glass-reinforced, PTFE-lubricated polycarbonate blend compounded by Thermofil Engineering Thermoplastics Inc.

Although a spokesman for Philips & DuPont Optical Company indicated that the firm was experimenting with different clear thermoplastics for possible future use in op-

PRICES TRENDLINES

WEEK ENDING OCT. 3, 1986

CHANGES/UP

None

CHANGES/DOWN

None

COATINGS INDEX

The Coatings & Plastics index reflects the prices of 13 representative materials in this sector and the quantity of each produced in 1985.

| | |
|----------------------|-------|
| OCT. 3, 1986 | 308.4 |
| Sept. 26, 1986 | 308.4 |
| Sept. 5, 1986 | 308.4 |
| OCT. 4, 1985 | 308.4 |

Chemical Prices Start on Page 40

Optical disk manufacturing, ultra-pure polycarbonate is the current material of choice, specified in the Phillips licensing package.

The optical disk market is only one of many high growth segments within the healthy polycarbonate market, which is expected to grow 8 percent annually through 1990. Another high growth area is the production of composites and alloys to be used as metal replacements in structural automotive and industrial applications.

Last year, domestic demand for polycarbonate totaled 292 million pounds.

Dow's Freeport, Tex. plant came on line in the second quarter of last year. G.E. plans to have a new "Lexon" polycarbonate plant facility online in Burkville, Ala., by early 1987.

PLASTICS MATERIALS

EPOXY RESINS — Shell Chemical Company, the largest US producer of commodity epoxy resins, is increasing non-contract selling prices for its "Epon" liquid and solid epoxy resin lines, effective October 1. Contract prices will be raised on November 1.

The increased market prices for liquid "Epon" resins up 4¢ per pound, and those for solid lines up 3¢ per pound.

Similar increases were announced by Dow

Continued on Page 57

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CHEMICAL PRICES

WEEK ENDING OCT 3, 1986

This chemical prices section contains spot quotations and/or list prices of suppliers of chemicals and related materials on a New York or other indicated basis. The listings are based on price information obtained from suppliers. Note that posted prices do not necessarily represent levels at which transactions actually may have occurred. They do not represent bid and asked prices, nor a range of prices over the week. Price ranges may represent quotations of different suppliers as well as differences in quantity, quality and location. All matters under this heading are fully covered by copyright.

An Index of weekly chemical market reports is on the back cover.

A

ABBREVIATIONS

THE TERMINOLOGY OF THE CHEMICAL MARKETPLACE

| | | | |
|---|----------|-------|------|
| C-8, dms. | lb. | 4.30 | 5.30 |
| C-10 dms. | lb. | 4.30 | 5.35 |
| Algin (see Sodium alginate) | | | |
| Alkali blue, dry, flushed, 110-lb. dms., divd. | lb. | 3.72 | 3.83 |
| Alkali blue prices 10. higher W. of Rockies. | | | |
| Allspice Guatemalan / Honduran, bgs. | lb. | .87 | - |
| Jamaican, bgs. | lb. | 1.05 | - |
| Allyl alcohol, tanks, f.o.b., Bayport, Tex. | lb. | .60 | - |
| Allyl bromide, 500-lblo dms. 2,000-lbs. or more, works. | lb. | 5.50 | - |
| Allyl caproate, 25-lb. cans. | lb. | 3.90 | 4.50 |
| Allyl chloride, tanks, f.o.b. works. | lb. | .65 | - |
| Allyl isothiocyanate, bals. | lb. | 6.40 | 6.90 |
| Almond oil, aril., bitter (see Benzaldehyde.) | | | |
| Almond oil, nat., bitter, NF f.p.e. | lb. | 3.50 | 3.60 |
| sweet | lb. | 1.24 | 1.30 |
| Aloe, Cape, cs. | lb. | 2.00 | - |
| powd. cs. | lb. | 2.25 | 2.75 |
| Curacao, kgs. | lb. | 2.60 | - |
| powd. kgs. | lb. | 3.00 | - |
| Aloin, NF, dms. | lb. | 5.00 | 8.70 |
| Alum, ammonium, tech. gran., bgs., c.f., LL, works | 100 lbs. | 35.00 | - |
| FCC powd. fiber dms., works 100 lbs. | 65.00 | - | |
| Alum, potassium, tech. gran. bgs., c.f., LL, works | 100 lbs. | 35.00 | - |
| FCC powd. fiber dms., works 100 lbs. | 65.00 | - | |
| a/alpha | | | |
| std./allowable | | | |
| amorph./amorphous | | | |
| ANP/American melting point | | | |
| anhyd./anhydrous | | | |
| AOAC/Association of Official Agricultural Chemists | | | |
| s.p.s./available phosphoric acid | | | |
| approx./approximately | | | |
| aril./artificial | | | |
| ASTM/American Society for Testing & Materials | | | |
| b/beta | | | |
| Se/Baume | | | |
| tbl./barrels | | | |
| b.c./beta-gamma | | | |
| b.g./beta/gamma | | | |
| tbl./barrels | | | |
| b.p./boiling point | | | |
| b.p./bone phosphate of lime | | | |
| b.r./boiling range | | | |
| bxs./boxes | | | |
| C/Centigrade | | | |
| cbs./carboys | | | |
| c.c./cubic centimeters | | | |
| CD/completely denatured | | | |
| d./cost insurance freight | | | |
| d.l./onload | | | |
| cns./cans | | | |
| com./commercial | | | |
| conc./concentrated | | | |
| cpc/chemically pure | | | |
| cpa/centipascles | | | |
| oryat./crystalline | | | |
| cs./cases | | | |
| ctns./cartons | | | |
| cyls./cylinders | | | |
| E/East | | | |
| s.p./end point | | | |
| equid./equalized | | | |
| exp./expressed | | | |
| extr./extracted | | | |
| f./Fahrenheit | | | |
| lb./pound | | | |
| ls.a./free alongside | | | |
| ferment./fermentation | | | |
| l.L./free fatty acid | | | |
| l.f./free from chlorine | | | |
| f.i.p.s./free from preservative cold | | | |
| fib./fiber | | | |
| f.o.b./free on board | | | |
| f.p./freezing point | | | |
| frt./freight | | | |
| g-/gamma | | | |
| gal./gallon | | | |
| d-/dextro | | | |
| dbl./double | | | |
| denat./denatured | | | |
| dest.-det./destructively distilled | | | |
| dist./distillate | | | |
| distri./distributor | | | |
| dvd./delivered | | | |
| dma./drums | | | |
| dom./domestic | | | |
| Incl./included | | | |
| Indust./industrial | | | |
| kgs./kegs | | | |
| f.-leavo | | | |
| lb./pound | | | |
| L.C./less carload | | | |
| L.L./less truckload | | | |
| lk./liquid | | | |
| m-/meta | | | |
| m.a.p./mixed aniline point | | | |
| meg./microgram | | | |
| mini./manufacturers | | | |
| min./minimum | | | |
| mol./mollen | | | |
| m.p./melting point | | | |
| redist./redistilled | | | |
| refd./refined | | | |
| refy./refinery | | | |
| resub./resublimed | | | |
| ret./returnable | | | |
| neut./neutral | | | |
| NF/National Formulary | | | |
| No./number | | | |
| Nom./nominal | | | |
| o-/ortho | | | |
| ord./ordinary | | | |
| ox./ounces | | | |
| P/phosphorus | | | |
| p./para | | | |
| Pac./Pacific | | | |
| pt./proof | | | |
| phos./phosphate | | | |
| photo./photographic | | | |
| pigs./packages | | | |
| powd./powdered | | | |
| precip./precipitated | | | |
| prod./producer | | | |
| TVA/temporary voluntary allowance | | | |
| ton/references to short ton of 2,000 pounds | | | |
| T.W./tank wagon | | | |
| USP/United States Pharmacopeia | | | |
| visc./viscosity | | | |
| VMAP/vernish makers & painters | | | |
| W/West | | | |
| whse./warehouse | | | |
| w.w./water-white | | | |

NOTE: A unit is 1 percent of 2,000 pounds of the basic constituent or other standard of the material. The percentage figure of the basic constituent multiplied by the unit-ton price shown in Chemical Materials Reporter gives the price of 2,000 pounds of the material.

CHEMICAL PRICES

WEEK ENDING OCT 3, 1986

| CHEMICAL PRICES | | | | | | |
|---|------------|--------|--------|--|--|--|
| WEEK ENDING OCT 3, 1986 | | | | | | |
| buide, gnd., cma, c.i. | 100 lbs. | 31.25 | - | | | |
| bins, same basis | 100 lbs. | 30.00 | - | | | |
| peroxide, 700-lb. dms., c.i., t.i., works. | lb. | .30 | - | | | |
| etraethyl, bulk, 1.l., t.o.b. | lb. | 1.05 | - | | | |
| sulfate, tech. (see Barium and Bismuth fixe). | lb. | 1.05 | - | | | |
| auflite, USP, X-ray diagnosis grade, powd., 25 kilo bgs., 10,000 kilos. | lb. | .58½ | - | | | |
| sulfide (black ash), dms., c.i., works. | ton | 480.00 | - | | | |
| optian | lb. | .76 | .85 | | | |
| Contar | lb. | .88 | .90 | | | |
| Grand Vert | lb. | 45.00 | - | | | |
| acid, t.i., t.o.b., works. | ton | 62.00 | 70.76 | | | |
| calched, refractory grade, 87-88% Al ₂ O ₃ , Baltimore & Mobile. | metric-ton | 229.28 | - | | | |
| NF, 55-60% dms. | lb. | 10.50 | 16.00 | | | |
| y wax, bgs. | lb. | 2.70 | 3.00 | | | |
| ax, ref'd, bleached white, brick, 100-lb. cns. | lb. | 3.10 | 3.20 | | | |
| ste, slabs, 100-lb. cns. | lb. | 3.05 | 3.10 | | | |
| ow, bricks, 100-lb. cns. | lb. | 3.00 | 3.10 | | | |
| ow, slabs, 100-lb. cns. | lb. | 2.86 | 3.05 | | | |
| te, dom, c.i. beige, f.o.b. works. | ton | 43.50 | - | | | |
| hydride, NF, dms. | lb. | 1.25 | - | | | |
| dms., c.i., t.i., | lb. | .73 | .83 | | | |
| are 4c. per lb. higher West of Rockies. | | | | | | |
| Indust. or nitreton, bargea, t.o.b. | gal. | .85 | - | | | |
| aton Rouge, La. | gal. | .85 | - | | | |
| aytown, Tex. | gal. | .85 | - | | | |
| atletteburg, Ky. | gal. | .85 | - | | | |
| icago district | gal. | .85 | - | | | |
| hocola Bayou, Tex. | gal. | .85 | - | | | |
| leighton, Pa. | gal. | .85 | - | | | |
| orpus Christi, Tex. | gal. | .85 | - | | | |
| eer Park, Tex. | gal. | .85 | - | | | |
| ouston district, spot. | gal. | .81 | .82 | | | |
| me, Ohio | gal. | .85 | - | | | |
| ood River, Ill. | gal. | .85 | - | | | |
| hexachloride, 88% gamma isomer (see Undane). | | | | | | |
| orange, powd., bgs., divd. lb. | 4.80 | B.70 | | | | |
| containers, divd. | lb. | 3.38 | 3.88 | | | |
| yellow, AAA, bgs., divd. lb. | 5.80 | 8.05 | | | | |
| DA, bgs., divd. | lb. | 7.35 | 7.40 | | | |
| DT, bgs., divd. | lb. | 5.85 | 8.20 | | | |
| the, DSD, dms., 1,000 kg./kgs. | kg. | 10.00 | 11.50 | | | |
| o.b., works. | kg. | 12.50 | - | | | |
| hydroxyproline, dms. | lb. | .55 | .58 | | | |
| acid, lech. bgs., c.i., t.i., f.o.b. works. | lb. | .55 | .58 | | | |
| ryat, dms., ton lots samebasis. | lb. | 1.73 | 1.75 | | | |
| um, Sumatra, cs. | lb. | 1.80 | - | | | |
| nanon, N.F., 1,000 lbs. or more, t.o.b. | lb. | 3.50 | 3.60 | | | |
| 000 kilos or more, f.o.b. kg. | kg. | 7.46 | - | | | |
| 1,000 kilos or more, fob works. | kgs. | 4.35 | - | | | |
| zoyethyl disulfide (see Mercaptobenzothiazyl disulfide). | | | | | | |
| azole, flake, dms., 1,000 lbs. or more, t.o.b. works | lb. | 8.10 | - | | | |
| dms., 1,000 lbs. or more, same basis. | lb. | 8.20 | - | | | |
| o-grade, dms., 1,000 lbs. or more, same basis. | lb. | 8.80 | - | | | |
| chloride, ref'd, dms. t.i., fti. equald. | lb. | .87 | - | | | |
| fri. equald. | lb. | .80 | - | | | |
| chloride dms., c.i., works. | lb. | .57 | .59 | | | |
| peroxide, regular gran., 10,000-lb. lots or more, bgs., works, fri. equald. | lb. | .74½ | .76 | | | |
| 60% and 55% formulations, dms., pails, tri. equald. | lb. | 2.35 | 8.88 | | | |
| 1.71 | 1.85 | | | | | |
| borex, tech., gran., decahydrate, 88½% bgs., c.i., works. | ton | 237.00 | - | | | |
| bulk, c.i., works. | ton | 192.00 | - | | | |
| tech., pentahydrate, gran. 98½%, bgs., c.i., works. | ton | 285.00 | - | | | |
| bulk, c.i., works. | ton | 220.00 | - | | | |
| Borax, NF (See Sodium borate). | | | | | | |
| Boric acid, tech., gran. 98.9%, bgs., c.i., works. | ton | 814.00 | - | | | |
| bulk, c.i., works. | ton | 689.00 | - | | | |
| Boron trichloride, CP, 1,800-lb. cys., works. | lb. | 3.80 | - | | | |
| Boron trifluoride, 80-lb. cys., t.i., t.o.b. works. | lb. | 4.03 | - | | | |
| bulk, same basis | lb. | 8.47 | - | | | |
| Boron trifluoride, etherate, 500-lb. dms., t.i., f.o.b. works. | lb. | 2.35 | - | | | |
| phenolato, 500-lb. dms., t.i., same basis | lb. | 1.85 | - | | | |
| Bromine, dms., t.i., works. | lb. | .87 | - | | | |
| bulk, 45,000-lb. min. works. | lb. | .83 | .34½ | | | |
| purif., t.i., divd. | lb. | .75 | - | | | |
| Bromine divd., prices for dms. and bulk shipped W. of Rockies, 1c. per-lb. higher. Bulk 1.l. prices 1c. to 2½c. per-lb. Higher for 30,000-lb. min. and 4c. to 6½c. per-lb. Higher for 15,000-lb. min. | | | | | | |
| Bromochloromethane, dms., c.i., f.o.b. Midland. | lb. | 1.12 | - | | | |
| Butadiene, tanks, t.o.b. | lb. | 1.12 | - | | | |
| equid. | lb. | .12½ | .13 | | | |
| dms., same basis. | lb. | .80 | - | | | |
| Butene-1, tanke, t.o.b. works. | lb. | .26 | .28 | | | |
| n-Butyl acetate, syn., tanks, tri. alid. E. | lb. | .52½ | - | | | |
| n-Butyl acrylate, tanks, tri. alid. E. | lb. | .88 | - | | | |
| n-Butyl alcohol, syn., ferment, tanks, tri. alid. | lb. | .34 | - | | | |
| sec-Butyl alcohol, syn., tanks, divd. | lb. | .965 | - | | | |
| tert-Butyl alcohol, syn., tanke, divd. E. | lb. | .70 | - | | | |
| Butyl aldehyde (see Butyraldehyde) | | | | | | |
| Butyl benzyl phthalate, tanks, tri. alid. | lb. | .59 | - | | | |
| Butyl chloride, tanks, works. | lb. | .99 | 1.00 | | | |
| Butyl cyclohexyl phthalate, tanks, divd. | lb. | .74 | - | | | |
| n-Butylether, dms., c.i., t.i., works. | lb. | 1.85 | - | | | |
| Butyl lauroyl phthalate, tanks, divd. | lb. | .35 | - | | | |
| n-Butylacetate, tanks, t.o.b. works. | lb. | 1.58 | - | | | |
| n-Butylbenzyl, 15% soin, 1,000-lb. lots or more cyls., 100% basis, divd. | lb. | 15.45 | - | | | |
| tanks, 3,000-lb. min., 100% basis, divd. | lb. | 14.75 | - | | | |
| Butyl methacrylate, tanks, tri. equid. | lb. | .86 | - | | | |
| Butyl octyl phthalate, tanks, divd. | lb. | .40 | .42 | | | |
| Butyl oleate, dist., dms., c.i., tanks. | lb. | .70 | .82 | | | |
| p-tert-Butylphenol, tanks works. | lb. | .60 | .75 | | | |
| Butyl phthalate (see Diethyl phthalate). | | | | | | |
| Butyl stearate cosmetic, dms., 77 dms. or more. | lb. | .91 | .97 | | | |
| tanks. | lb. | .82 | - | | | |
| Butyl stearate, t.o.b., t.i. | lb. | .00 | .62 | | | |
| tanks. | lb. | .55 | .59 | | | |
| Butylamine (see Mono-, Di- and Tributylamine). | | | | | | |
| tert-Butylamine, dms., c.i., t.i., t.o.b. works. | lb. | 1.31 | - | | | |
| tanks, same basis. | lb. | 1.17 | - | | | |
| Butylated hydroxyanisole, food grade, dms., divd. | lb. | 8.80 | 8.85 | | | |
| Butylated hydroxytoluene, food, feed grades, c.i., t.i., bgs., divd. lb. | 1.24 | 1.30 | | | | |
| tech., bgs., c.i., t.i., divd. lb. | 1.24 | 1.30 | | | | |
| 1,3-Butylene glycol, tanks, divd. | lb. | .72 | - | | | |
| Butynediol, tanks, divd. | lb. | .28½ | .38 | | | |
| Butyric acid, tank, tri. alid. | lb. | .44½ | - | | | |
| Butyric ether (see Ethyl butyrate). | | | | | | |
| Butyrolactone, tanks, t.o.b. plant. | lb. | 1.20 | - | | | |
| n-Butyronitrile, dms., c.i., divd. tanks, divd. | lb. | .93 | - | | | |
| 1.54 | - | | | | | |
| Cadmium carbide, std., generator size, bulk, c.i., t.o.b. works. | ton | 402.00 | - | | | |
| Calcium carbonate, pulverized, 325-mesh, bgs., bulk, t.o.b. works. | ton | 48.00 | - | | | |
| slurries, 54% solids, same basis. | ton | 1.77 | - | | | |
| 72% solids, same basis. | ton | 106.27 | - | | | |
| quicklime, gran., Ind., bulk, work. | ton | 100.93 | - | | | |
| Calcium carbonate, coated, bgs., c.i., works. | lb. | .0830 | .1600 | | | |
| Calcium carbonate, precip., bgs., c.i., t.i. | ton | 385.00 | 445.00 | | | |
| Calcium carbonate, precip. medium, bgs., c.i., works. | ton | 110.00 | 150.00 | | | |
| precip. dense, bgs., c.i., surface treated, bgs., c.i., works. | ton | 265.00 | - | | | |
| ultrafine, U.S.P. bgs., c.i., works. | ton | 217.00 | 225.00 | | | |
| Calcium chloride, conc., reg. grade, 77-80%, fleke, bulk, c.i., works. | ton | 153.00 | - | | | |
| 100-lb. bgs., c.i., same basis. | ton | 186.00 | - | | | |
| anhyd., 94-97%, fleke or pellet, bulk, c.i., same basis. | ton | 217.00 | - | | | |
| 80-lb. bgs., c.i., same basis. | ton | 279.00 | - | | | |
| brining grade, 80-lb. bags. | ton | 285.00 | - | | | |
| Calcium chloride, liq., 100 percent basic, t.c., t.i., barge. | ton | 99.75 | - | | | |
| 45% same basis. | ton | 116.00 | - | | | |
| Calcium chloride, USP, gran., 225-lb. dms., t.i., ft. equald. | lb. | .90 | - | | | |
| Calcium citrate, purif., 200-lb. dms., 10,000 lbs. or more, f.o.b. works. | lb. | 3.82 | - | | | |
| Calcium cyanamide, indust., anhyd. dme, works. | ton | 400.00 | 460.00 | | | |
| Calcium gluconate, USP powd. t.i. lb. | lb. | 1.80 | - | | | |
| Calcium hydride, lump, dms., 25-1,000-lb. lots, works. | lb. | 10.50 | 13.25 | | | |
| Calcium hypochlorite, 100-lb. dme., truckloads ship. t.i. E. of Rockies. | ton | 92.40 | - | | | |
| Calcium hypophosphite, dms., bulk, 500 kilos or more. | lb. | 13.75 | 14.50 | | | |
| Calcium iodate, FCC dms., t.o.b. works. | lb. | 5.50 | - | | | |
| Calcium iodide, 50-kilo dme., f.o.b. works. | kg. | 23.65 | 25.65 | | | |
| Calcium lactate, NF powd., pentahydrate, dme., 24,000 lbs. or more, f.o.b. works. | lb. | 2.00 | - | | | |
| NF, gran., hydrate, same basis, bgs. special gran., dried grade, samebasis. | lb. | 2.10 | - | | | |
| Calcium naphthenate, lin., 4% Ce, c.i., t.o.b. plant, E of Rockies. | lb. | 2.80 | - | | | |
| d-Calcium pantothenate, USP, 100-500-kilogs. | lb. | .85 | - | | | |
| d-Calcium pantothenate, feed grade, t.o.b. (ft. alid., 250 kilos or more). | lb. | 11.50 | 12.50 | | | |
| d-Calcium pantothenate, calcium chloride complex, feed grade, 150 grams per lb., t.o.b., fri. alid., 600 lbs or more. | lb. | 8.00 | 8.50 | | | |
| Calcium phosphate, dibasic, 1aaid grade, 18½% P. bulk, c.i., t.i., f.o.b. works. | ton | 2.75 | - | | | |
| Calcium phosphate, dibasic, dihydrate, USP, bgs., c.i., t.i., works, fri. equald. | ton | 226.00 | - | | | |
| Calcium phosphate, dibasic, dihydrate, USP, bgs., c.i., t.i., works, fri. equald. | ton | B2.50 | - | | | |
| anhyd., USP, same basis. | ton | 71.75 | - | | | |
| 60-lb. danitice grade, same basis. | ton | 46.90 | - | | | |
| Calcium phosphate, monobasic, monohydrate, food grade, bgs., c.i., t.i., works, fri. equald. | ton | 60.50 | - | | | |
| Caesal, Imp., acid-precip., grd. 30-mesh, Australian, adibla, same basis, c.i., fri. equald. | lb. | 1.45 | - | | | |
| Australian, indust., same basis, c.i., fri. equald. | lb. | 1.365 | - | | | |
| Cassella acid, 303 mol. wt., dms., fri. alid., 100% basis. | lb. | 3.70 | - | | | |
| Cassela, Konini "A" bgs. | lb. | .95 | 1.05 | | | |
| "B" pgs. | lb. | .72 | .78 | | | |
| Castor oil, raw, No. 1, Brazil, tanks. | lb. | .31 | .31½ | | | |
| USP 5-9 dms. | lb. | .74 | - | | | |
| refd. dead, 6-9 dms. | lb. | .78 | - | | | |
| blown, 5-8 dms. | lb. | .75 | - | | | |
| dehydrated, boiled, tanks. | lb. | .74 | - | | | |

C

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|--|--------|--------|--|--|
| grada, t.l., dms., same basic lb. | 1.32 | - | | |
| ke, same basis..... | 1.28 | - | | |
| zozosta, dms..... | 1.85 | 2.26 | | |
| chlorid, tech, non-ret. dms., c.l., t.l., Int. equid..... | .59 | - | | |
| t.o.b..... | .54 | - | | |
| cinnamate, 25-lb. cans..... | 8.60 | 8.85 | | |
| yl-N,N-dimethylamino, t.l., dms., t.o.b. works..... | 2.30 | - | | |
| ormate, dms..... | 10.60 | - | | |
| utyl-m-cresol (see Mono-tert-butyl-m-cresol), ocsogend, dms..... | 15.50 | - | | |
| ropionate, dms..... | 3.86 | - | | |
| alicyclic..... | 1.80 | - | | |
| ne acetone, ons., bogs..... | 2.80 | 3.26 | | |
| ot oil, nat, Italian, t.o.b..... | 2.95 | 3.26 | | |
| roxyphenothiazine (see b-Oxyphenothiazic acid), crystal, 500 gms. or more... gm. | 44.00 | - | | |
| (see Diphenyl), nifrate, purif. cryst., 100-lb. dms., ft. equid..... | 10.00 | - | | |
| n oxychloride, 100-lb. dms., works..... | 17.20 | - | | |
| subcarbons, USP, medium powd., 225-lb. dms., works, lb. | 16.31 | 16.50 | | |
| substrate, purif., 100-lb. dms., works..... | 10.60 | - | | |
| substrate NF, powd., 200-lb. dms., works..... | 14.46 | - | | |
| substituted, purif. powd., 50-100-lb. dms., works...lb. | 17.00 | - | | |
| trioxide, reagent, powd., 100-lb. dms., works..... | 16.00 | 16.45 | | |
| hol-A, epoxy grade, hopper car, divd..... | .87 | - | | |
| arbonate grade, same basis lb. | .71 | - | | |
| e, syn, Imp. bags..... | .20 | - | | |
| ose oil, Braz., dms..... | 10.75 | 12.00 | | |
| an, dms..... | 10.76 | - | | |
| er (red 48) dms., Int. std., t.o.b., same basis, same basis..... | 7.25 | 8.05 | | |
| al, elemed, dom, bags, c.l., t.o.b. MidWest plants, ton | 8.60 | 7.80 | | |
| osphata, defluorinated of lime (see Defluorinated phosphate), phosphate precip. (see Calcium phosphate tribasic), sch. amyd, 95%, bags, c.l., works..... | 180.00 | 190.00 | | |
| Cadmium chloride, purif. cryst. 100-lb. dms., t.l., works..... | 3.73 | - | | |
| Cadmium CP, red, dark shade, bbls., 100-lb. lots, Int. std., E. of Rockies..... | 11.33 | 18.36 | | |
| light shade, bbls., same basis..... | B.18 | 12.00 | | |
| medium shade, bbls., same basis, bbls., same shade..... | 10.68 | 16.20 | | |
| Cadmium, CP yellow, all shades, bbls., 100-lb. lots, Int. std., E. of Rockies..... | 8.10 | 7.07 | | |
| Cadmium fluoroborate, liq. conc., dms., t.l., works, Int. equid..... | 2.27 | - | | |
| medium-light shade, bbls., same basis..... | 3.22 | - | | |
| Cadmium-mercury lithopone, maroon shade, bbls., ft. std. E. of Rockies..... | 4.50 | - | | |
| Cadmium metal Ingots or sticks, ton lots, ca. divd..... | 1.20 | 1.60 | | |
| Cadmium nitrate, purif. flake 400-lb. dms., t.l., t.o.b. ship. pt., bbls. | 2.10 | - | | |
| Cadmium-selenide-lithopone, orange, light shade, bbls., 400-lb. lots, ft. std. E. of Rockies..... | 3.87 | 4.00 | | |
| deep shade, bbls., same basis..... | 4.47 | 4.60 | | |
| Cadmium-selenide lithopone, red, dark shade, bbls., same basis..... | 8.77 | 8.80 | | |
| light shade, bbls., same basis..... | 8.27 | 8.30 | | |
| medium-light shade, bbls., same basis..... | 8.72 | 8.75 | | |
| medium shade, bbls., same basis, bbls., maroon shade, bbls., same basis, bbls. | 8.37 | 8.40 | | |
| Cadmium-selenide lithopone, yellow, all shades, bbls., same basis..... | 7.47 | - | | |
| Cadmium sulfate, 50-lb. dms., any quantity, t.o.b. ship. pt., bbls. | 2.87 | 3.00 | | |
| Gentiane, dom, USP, syn. cryst. anhyd. powd., 100-lb. dms., o.t., t.l., Int. std., Imp. cryst. anhyd. powd., dms., 10,000 lbs. or more..... | 4.05 | - | | |
| Calamine, USP, dms..... | 1.60 | 1.70 | | |
| Calomel oil, dms..... | 26.80 | 35.00 | | |
| Calciferol (see Ergocalciferol), purified, 100-lb. lots, Int. std., | | | | |

CHEMICAL PRICES

WEEK ENDING OCT 3, 1988

chlorinated paraffin, Zone 2 prices are 1c. per lb. higher and
Zone 3 prices are 2c per lb. higher and 1.1. drum prices

| | | |
|---|------|--------|
| are 5c per lb. higher | | |
| chlorinated rubber, 5, 10, 20 ccs., bgs. | .186 | - |
| t.l., divd. | b. | |
| 40 ccs., bgs., t.l., divd. | b. | 1.92 |
| 125 ccs., bgs., t.l., divd. | b. | 2.80 |
| 300 ccs., bgs., t.l., divd. | b. | 2.75 |
| chlorine, ton single units works, | | |
| t.o.b., frt. equald. | ton | 186.00 |
| chloroacetic acid, mono, high purity, | | 200.00 |
| flsks., 68% bulk f.o.b. | | |
| works. | lb. | .56 |
| -Chloro-4-aminotoluene, tech., lq. | | |
| dms., c.i., t.l., f.o.b. works. | lb. | 1.88 |
| -Chloroaniline, liquid, dms., o.i., f.o.b. | | |
| works. | lb. | 1.63 |
| tanks, same basis. | lb. | 1.55 |
| -Chloroaniline, solid, o.i., t.l., f.o.b. lb. | lb. | 1.70 |
| flaks, dms., c.i., same basis. | lb. | 2.00 |
| -Chlorobenzaldehyde, dms., t.l., | | |
| works. | lb. | 2.45 |
| -Chlorobenzaldehyde, dms., 2,000 | | |
| lbs. or more, works. | lb. | 3.84 |
| -Chlorobenzaldehyde, dms., t.l., wks. . . . | lb. | 3.90 |
| -Chlorobenzoic acid, dms., 500-lb. | | |
| lots or more, works. | lb. | 1.69 |
| Cloform, tech., tanks, dist. divd. | lb. | 3.49 |
| tech., consumers, tanks, divd. | lb. | 3.41½ |
| NF tanks, min., consumer, 4,000 | | |
| gals. divd. | lb. | 3.51½ |
| -Chloro-4-nitroaniline, pasta, com- | | |
| modity basis, dms., t.l., | | |
| f.o.b. | lb. | 3.08 |
| powd., same basis. | lb. | 3.16 |
| -Chloro-2-nitroaniline, pasta, 172.5 | | |
| mol. wt., commodity basis, | | |
| dms., t.l., f.o.b. | lb. | 2.25 |
| powd., same basis. | lb. | 2.70 |
| -Chlorophenol, dms., c.i., frt. | | |
| equald. | lb. | 2.00 |
| -Chlorophenol, dms., c.i., frt. | | 2.40 |
| equald. | lb. | 1.25 |
| Chloropicrin, comt., 1,500-lb. cyls., t.l. | | |
| f.o.b. works. | lb. | 1.25 |
| Chlorosulfonic acid, tanks, frt. | | |
| equald. | lb. | .18½ |
| -Chlorotoluene, tech., tanks, | | |
| works. | lb. | 1.00 |
| Cholecalciferol, dry, 40,000,000 units | | |
| per gram, kilo lots. | gm. | 24.00 |
| Choline bitartrate, cryst., 98% min., 50 | | |
| kilo dms., f.o.b. Springfield, | | |
| Mo. | kilo | 8.90 |
| Choline chloride, feed grade, 70% | | |
| squeous, 1 c., L.t., divd. E. of | | |
| Rockies | lb. | .28 |
| 80% dry supplement. | lb. | .39 |
| Choline chloride, 80% dry supplement, | | |
| bulk hopper cars. | lb. | .39 |
| bgs., 60,000 lbs. min. | lb. | .40 |
| Choline chloride, pharmaceutical, 50 | | |
| kilo, 101s., f.o.b. Springfield, | | |
| Mo. | kilo | 5.00 |
| Choline dihydrogen citrate, 98% min., | | |
| 50 kilo lots, f.o.b. Springfield, | | |
| Mo. | ido | 9.00 |
| Chrome greed, CP, extra light, bgs., | | |
| divd. E. of Rockies. | lb. | 1.88 |
| light, bgs., same basis. | lb. | 1.70 |
| medium, bgs., same basis. | lb. | 1.72 |
| extra deep, CP, same basis. | lb. | 1.74 |
| Chrome orange, CP, bgs., divd. E. of | | |
| Rockies. | lb. | .83 |
| Chrome yellow CP bbls., divd. E. of | | |
| Rockies. | lb. | 1.09 |
| Chromic acid, 99.4%, flake dms., c.i. | | |
| frt. equald. | lb. | 1.16 |
| grd., same basis. | lb. | 1.25 |
| Chromium acetate, soot, 70% dms. | | |
| 500-2,000-lb. lots, works. | lb. | .10 |
| Chromium fluoride, dms., t.l., | | |
| works. | lb. | .91 |
| Chromium nitrate, dms., t.l., t.o.b. . . . | lb. | 1.45 |
| 10% metal soln., 500-lb. dms. same | | |
| basis | lb. | .74 |
| Chromium oxide, hydrated, 50-lb. | | |
| bgs., cl. | lb. | 5.50 |
| pure, bgs., c.i. | lb. | 1.90 |
| Cinnamaldehyde, ons., dms. | lb. | 1.85 |
| Cinnamyl alcohol, 25-lb. cans. | lb. | 4.50 |
| Cinnamon, H2. | lb. | 1.05 |
| Cinnamon bark oil, bogs. | lb. | 88.00 |
| Cinnamomum oil, dms. | lb. | 2.80 |
| Citraal, nat., dms. | lb. | 5.50 |
| syn. 55-qt. dms. f.o.b. | lb. | 3.16 |
| Citric acid, USP, hydrrous, gran., 250- | | |
| lb. dms., t.l. | lb. | 1.18 |
| Citric acid, USP, anhyd., gran., 250-lb. | | |
| dms., t.l., def. | lb. | .86 |
| Citric acid anhydride, powder, higher | | |
| Citronella oil, Ceylon, dms. | lb. | 2.12 |
| Jeva, dms. | kilo | 5.05 |
| Chire, dms. | kilo | 4.30 |
| Citronel, 25-lb. cans. | lb. | 3.85 |
| Citronellol dms., f.o.b. | lb. | 3.56 |
| Citronellylacetate, dms. | lb. | 5.85 |
| Citronellylformate, 25-lb. cans. | lb. | 6.50 |
| Civet, ani., bogs. | lb. | 20.00 |
| nat. | kilo | 500.00 |
| Clay ball, dom. air Roasted, bgs., c.i. | | |
| Tenn. | ton | 49.00 |
| dom. crushed, moisture-repellent, | | |
| bulk, c.i., Tenn. | ton | 24.00 |
| Clay China (see Kaolin). | | |
| Cleaners, naphtha, 140° flash tanks., | | |
| New Jersey or New York, | | |
| divd. | gal. | 1.40 |
| Clove leaf oil, Indonesian, reg. dms. kilo | | |
| Madagascar, reg. | kilo | 3.15 |
| Clove bud oil. | kilo | 3.90 |
| Cloves, Brazil. | lb. | 24.00 |
| Zanzibar. | lb. | 2.18 |
| Madagascar. | lb. | 4.20 |
| | lb. | 2.20 |

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| CMC, technical, 96% minimum, low or medium vis., bags, 24,000 lbs. | |
| f.o.b. Hopewell, Va., 100% basis | 1.25 |
| detergent makers, f.o.b. manufac- | |
| turing point..... lb. .54 | - |
| CMC, purif., high vis., (see Cellulose gum). | |
| Cedar pitch, indust., iq., works ton. | 250.00 |
| roofing, 140-155, Federal specifi- | 255.00 |
| cation RP-391 Type 1, bulk | |
| works, ton 350.00 | - |
| Cobalt acetate, dms., liq., fl. std. lb. | 3.91 |
| Cobalt carbonate, powd., dms., fri- | |
| eld. lb. 9.81 | 4.25 |
| Cobalt chloride, dms., 5,000 lbs. or | 8.19 |

| | | | |
|---|-----------|--------|--------|
| Cobalt hydroxide, dms., t.i., frit. alid. | lb. | 9.20 | 10.55 |
| Cobalt metal, 99.5-99.9%, 250-kilo | | | |
| dms., t.o.b. NY, Chicago, lb. | | 11.70 | - |
| Cobalt naphthenate, liq., 8% Co. | | | |
| dms., divd. | lb. | 2.06 | - |
| Cobalt nitrate, dms., t.i., frit. alid. | lb. | 2.74 | 3.45 |
| Cobalt oxide, Imp., black, 72-73% | | | |
| Co., lb. | lb. | 8.51 | - |
| Cobalt oxide, imp., 70-71% Co. | lb. | 9.78 | - |
| Cobalt phosphate powd. 32.1% Co. | | | |
| dms., divd. | lb. | 1.35 | - |
| Cobalt rechlorate fusod, 3% Co. | | | |
| dms., lb. | lb. | .38½ | - |
| Cobalt sulfate, cryst., bgs., 10,000-lbs. | | | |
| ormore, frit. alid. E. | lb. | 2.91 | 3.64 |
| monohydrate, dms., frit. alid. | lb. | 4.56 | 6.02 |
| Cobalt sulfate, 6% Co., dms., divd. | lb. | 2.16 | - |
| Cocaine bark, bls. | lb. | .40 | .45 |
| Coco butter, spot. | lb. | 2.33 | - |
| Coconut oil (See Oils, Fats & Waxes market report). | | | |
| Coconut oil acids, diet/fried, t.o.b. | | | |
| t.o.b. | lb. | .52 | .58 |
| double distilled, same basis | lb. | .54 | .63 |
| Cod oil, t.o.b., Gloucester, Mass., bulk | gal. | 8.50 | - |
| Codaine alkaloid, NF, 25-kilo lots, kilo | kilo | 900.00 | - |
| Codine phosphate, USP, crn., 25-kilo lots | kilo | 640.00 | - |
| Codine sulfate, NF crn., 25-kilo lots | kilo | 775.00 | - |
| Codliver oil, NF, dms. | gal. | 8.50 | 7.25 |
| Copalid balsam, dms. | lb. | 1.50 | - |
| Copalid oil, crn., dms. | lb. | 3.78 | - |
| Copper acetate, monohydrate, cryst., tech., dms., t.t. works. | lb. | .71 | .74 |
| Copper bromide, cupric) 200-lb. dms., 100,000-lbs. -per-year contrac, works. | lb. | 1.34 | - |
| Copper carbonate, 55% Cu. dark, dense, 50-lb. bgs., c.t., t.t. works. | 100 lbs. | 108.30 | - |
| light, fluffy, 50 lb. beige, c.t., t.t. works. | 100 lbs. | 109.30 | - |
| Copper chloride (cupric), enhyd., c.t., works. | lb. | .90 | - |
| Copper cyanide, tech. dms., 24,000-lb. lots or more. | lb. | 2.30 | 2.92 |
| Copper fluorocarb, (cupric), liq. conc., d ms., t.f., works. frit. equid. | lb. | .92 | - |
| Copper gluconate, FCC grade, 25-lb. dm., frit. equid. | lb. | 8.50 | - |
| Copper metal electrolytic wire bars, divd., domestic, beals. | lb. | .82½ | - |
| Copper naphthenate, liq., 8% Cu. | | | |
| dms., frit. alid. | lb. | 1.19 | - |
| Copper nitrate (cupric), purif., flake, dms., f.t. works. | lb. | 43¼ | - |
| Copper oleate, solid, 6% Cu. time, works frit alid. | lb. | .87 | - |
| Copper oxide, black (cupric), dms., 80,000-lb. lots, works. | lb. | 1.21 | - |
| red (cuprous), dms., 97%, USN Type 1, (AA), 90,000-lb. lots, works. | lb. | 1.18 | 1.20 |
| red, 90%, Type 2, same basis | lb. | 1.15 | - |
| Copper-B-quinoformate, 10%, liq. emulsion, t.t. divd. | lb. | 2.52 | - |
| Copper sulfate, cryst., pentahydrate, 98% b. g.e., c.t., f.o.b. works. | 100 lbs. | 49.45 | - |
| CP, pentahydrate, cryst., dms., t.t. works. | 100 lbs. | 90.00 | - |
| monohydrated, 35% Cu, dms., e.t. works. | 100 lbs. | 75.10 | - |
| basis, bgs., c.t. works. | 100 lbs. | 88.30 | - |
| Coriander oil, USP, dms. | lb. | 22.00 | 28.00 |
| Coriander seed Moroccan. | lb. | .36 | - |
| Rumanian | lb. | .36 | .37 |
| Corn oil (See Oils, Fats & Waxes market report). | | | |
| Corn oil, crude, tools (soapstock), 95% acid; New York. | lb. | 13½ | .14 |
| Corn oil acid, dms. | lb. | .50 | - |
| tanks | lb. | .32 | .40 |
| Corn syrup 43 6e., tanks, t.o.b. works. | 100 lbs. | 11.22 | 11.43 |
| Cortisone acetate, USP, dms., 5 kilo or more | gram. | .80 | - |
| Cottonseed meal (See Oils, Fats & Waxes market report). | | | |
| Cottonseed oil (See Oils, Fats & Waxes market report.) | | | |
| Cottonseed oil, solubilized (soap stock), acid, 95%, tanks, N.Y. | lb. | .13 | - |
| Cottonseed oil acids, dist., dms. | lb. | .83 | - |
| tanks | lb. | .55 | - |
| Coumarin, NF X, cryst. over 600-lb. lots. | lb. | 6.00 | 6.20 |
| Cream of tartar (see Potassium bitartrate). | | | |
| Cresacol, coaltar, grade 1, tons, f.o.b. works. | ton, gal. | 1.15 | 1.18 |
| soin, 80/20, tanks, same basis, gal. | 1.134 | 1.17 | |
| p-Cresidine, fused, dms., works | lb. | 4.31 | - |
| m-Cresol, 95-98%, dms., t.t. o.b. lb. | lb. | 1.71 | - |
| tanks, same basis | lb. | 1.65 | - |
| p,p-Cresol, 99%, dms., t.t. o.b. lb. | lb. | .64 | - |
| bulk, same basis | lb. | .62 | - |
| c-Cresol, 98% pure, dms., t.t. f.o.b. lb. | lb. | .67 | - |
| bulk, same basis | lb. | .75 | - |
| 98% pure, dms., f.t. f.o.b. | lb. | .67 | - |
| bulk, same basis | lb. | .75 | - |
| p-Cresol, 98%, dms., t.t. f.o.b. lb. | lb. | 1.22 | - |
| bulk, same basis | lb. | .95 | 1.15 |
| Cresylic acid, coaltar, dom., metapara content above 25%, resin and trioxayl phosphate grades, tanks, frit. alid. | lb. | .56 | - |
| Cresylic acid, dom., metapara content 25% or less, tanks, frit. alid. | lb. | .58 | - |
| Crotonic acid, 200-lb. dms., t.t. o.b. divd. | lb. | 1.50 | - |
| Crotonyl acetate, bulk, c.t. works | ton | 410.00 | 550.00 |

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|---|--------|--------|---|
| oil, powdered, 5% rotenone, basis, | | | |
| 50-lb. bgs., t.i., works | .90 | | - |
| oil, bulk, contract, f.o.b. lb. | .14 | .14 | |
| oiled, Indian, bgs. lb. | .95 | 1.00 | |
| oic acid, dms., c.t., t.i. frt. | | | |
| equaled.... lb. | 1.19 | 1.37 | |
| oil aldehyde, 50% min. alde- | | | |
| hyde content, dms. lb. | 4.85 | - | |
| oil, dms. lb. | 7.35 | 8.20 | |
| oil, 2% dms. lb. | 7.85 | - | |
| oil hexane, bulk, barges, wks. gal. | .9925 | .9925 | |
| oil xanol tech., tanks, f.o.b. lb. | .52 | .65½ | |
| oil xanons tech., tanks, f.o.b. | | | |
| works. lb. | .55½ | .59½ | |
| tanks, divd. lb. | .585 | - | |
| oxyamine, tech., tanks, | | | |
| works. lb. | .85 | - | |
| oic acid, tech., 60-lb. bgs., c.t., t.i. | | | |
| works, frt. aqueld. lb. | 1.10 | 1.25 | |
| oily ester, tech., 55-gal. dms., | | | |
| c.t., t.i., works, frt. equaled. lb. | 1.30 | - | |
| oils, same basis. lb. | 1.25 | - | |
| dimethylamine cont., t.c., t.i. | | | |
| works, frt. ald. gal. | 9.05 | - | |
| alcohol, mixed isomers, tanks, | | | |
| divd. lb. | .32 | - | |
| ums grade, dms. lb. | .75 | - | |
| mined phosphate (tricalcium), | | | |
| feed grade, 18% P, c.t., bulk, | | | |
| f.o.b. works. ton | 195.00 | 229.00 | |
| ured alcohol, ethyl, CD18, CD18, | | | |
| tanks, divd. E. gal. | 1.87 | - | |
| • Tankcar sales require written authorization by Alcohol | | | |
| and Tobacco Tax Division. | | | |
| ured alcohol, ethyl, | | | |
| D28, tanks, divd. E. gal. | 1.81 | - | |
| D34, tanks, divd. E. gal. | 1.79½ | - | |
| D23A, tanks, divd. E. gal. | 1.86 | - | |
| D23H, tanks, divd. E. gal. | 1.90 | - | |
| D29, tanks, divd. E. gal. | 1.83 | - | |
| D30, tanks, divd. E. gal. | 1.72½ | - | |
| D35A, tanks, divd. E. gal. | 1.98½ | - | |
| ured alcohol, ethyl, brucine formula | | | |
| 9D40, tanks, divd. E. gal. | 1.83 | - | |
| l, optional formula, SD40, tanks, | | | |
| divd. E. gal. | 1.62½ | - | |
| nyhd. alcohol on above formulae, prices are 12c. per gal. | | | |
| higher. | | | |
| Coast divd. prices are the same as Eastern prices, | | | |
| except in Idaho, Oregon and Washington where a 5c. | | | |
| differential on tankcars is maintained. | | | |
| ephedrine hydrochloride (See Methamphetamine hy- | | | |
| drochloride) | | | |
| gent alkylate, straight chain do- | | | |
| decylbenzene, tanks, barges, | | | |
| f.o.b. lb. | .45 | - | |
| in, corn, canary dark, paper bgs., | | | |
| c.t., works. 100 lbs. | 28.04 | - | |
| white, paper bgs., c.t., | | | |
| works. 100 lbs. | 27.43 | - | |
| ose, anhyd., corn, bgs., c.t., | | | |
| divd. New York. 100 lbs. | 41.10 | - | |
| SP special, 100-lb. bgs., c.t., | | | |
| divd. New York. 100 lbs. | 48.60 | - | |
| ose, hydrated corn, bgs., c.t., | | | |
| divd. New York. 100 lbs. | 24.26 | - | |
| stern zone. 100 lbs. | 25.80 | - | |
| stone alcohol, acetone free, | | | |
| tanks, divd. lb. | .52 | - | |
| yl, flavor grade, dms. lb. | 9.26 | 15.00 | |
| monium phosphate, fert. grade, | | | |
| min. 18% N, 46% P, bulk, c.t., | | | |
| f.o.b. Fla. works. ton | 140.00 | 145.00 | |
| monium phosphate, feed grade, | | | |
| 16% N, 20% P, bulk, c.t., t.o.b. | | | |
| Fle. works. ton | 240.00 | - | |
| bgs., same basis. ton | 260.00 | - | |
| monium phosphate, tech., bgs., | | | |
| c.t., t.i., works, frt. | | | |
| equaled. 100 lbs. | 52.60 | - | |
| od grade, bgs., c.t., t.i., same ba- | | | |
| sis. 100 lbs. | 87.76 | - | |
| Di-tert-amylophenol, min. 96.5%, | | | |
| dms., o.t., t.i., works. lb. | 1.04 | - | |
| tanks, works. lb. | .97 | - | |
| ylde yellow, OT, (yellow 14), dms., | | | |
| frt. ald. lb. | 6.20 | - | |
| aniline dihydrochloride, 100%, | | | |
| MW 244, dms., t.i., divd. lb. | 4.26 | - | |
| Di-tert-Butyl-p-Cresol (see 8-Butylhydroxytoluene) | | | |
| Butyl fumarate, tanks, f.o.b. | | | |
| works. lb. | .77 | .65 | |
| Butyl maleate tanks, f.o.b. works. | .83 | .84 | |
| Butyl phthalate, tanks, works. lb. | .84 | .80 | |
| Butyl sebacate tanks, works. lb. | 1.72 | 1.68 | |
| Butylamine, dms., c.t., divd. lb. | 1.12 | - | |
| tanks, same basis. lb. | 1.06 | - | |
| O-chloroforontina, liako, dms., | | | |
| works. lb. | 2.00 | - | |
| ed, dms., works. lb. | 1.80 | - | |
| Dichloroantilina, tech. 68%, solid, | | | |
| dms., o.t., t.i., f.o.b. works. lb. | 1.46 | 1.67 | |
| chlorobenzene, tech. 80%, dms., | | | |
| c.t., t.i., divd. lb. | .52 | - | |
| tanks, same basis. lb. | .45 | - | |
| % rafid, dms., o.t., same ba- ais. lb. | .54 | - | |
| tanks, same basis. lb. | .47 | - | |
| chlorobenzene, graded, 300-lb. | | | |
| dms., t.i., f.o.b., frt. equaled. lb. | .51 | .52 | |
| tanks, liq., same basis. lb. | .43 | .47 | |
| O-chloro-4-nitroaniline, dms., | | | |
| 10,000 lbs. or more, works. lb. | 3.30 | - | |
| Phenoxycyacetic acid (see 2,4-O- | | | |
| cyclohexylamine, dms., o.t., t.i., | | | |
| f.o.b. lb. | 1.35 | - | |
| tanks, same basis. lb. | 1.25 | - | |
| cyclopentadiene, high-purity, 87- | | | |
| 98%, tanks, works. lb. | .36 | - | |
| thiophosphine, tanks, frt. ald. lb. | .44 | .47 | |
| thiophosphine lauryl sulfate, tanks, | | | |
| frt. ald. lb. | .41 | - | |

| | |
|---|----------|
| yl barbituric acid (see Barbital) | |
| yl carbamate, 1epkweagons, | |
| f.o.b. works | lb. 1.40 |
| yl ethanalamine, CP dms., c.t. | |
| divd. | lb. 1.19 |
| anks, divd. | lb. 1.10 |
| yl thiuronamine tech., 8c. per lb. lower. | |
| yl oxalate, dms., c.t., f.o.b. | |
| works | lb. 1.80 |
| yl phthalate, tonks, f.o.b. | lb. .69 |
| orless cosmetic grade, t.l. | |
| works | lb. .97½ |
| yl sulfate, tanks, Int. old E | lb. .59 |
| yl thiourea, dms., c.t., 1.l. | |
| works | lb. 2.49 |

| | | |
|--|-----|-------|
| Dipropylene glycol, tank, 100-lb. | lb. | 1.10 |
| Dipropylene glycol monomethyl ether, dms, c.l., divd. | lb. | .54 |
| tanks, same basis. | lb. | .46 |
| Di-o-tolylguanidine, powd., dms, 1-l., frt. old. | lb. | 2.92 |
| Di-o-tolylthiourea, tech., solid, dms, 1-l., frt. old. | lb. | 3.11 |
| Oltridecyl phthalate, tanks, divd. | lb. | .94 |
| Dundecyl phthalate, tanks, divd. | lb. | .81 |
| Divinylbenzene, 100% boils, tanks works. | lb. | 2.75 |
| dms, 100% basis. | lb. | 3.00 |
| I-Dodecanol, syn., tanks, t.o.b. | lb. | .76½ |
| Dodecanyl succinic anhydride, dms., c.l., t.i., divd. | lb. | .99 |
| Dodecylbenzene (see Detergent Alkylate). | | |
| Dodacophenol, tanks, min. frt. old. E | lb. | .49 |
| Dyes, coater, certified colors for food, drugs and cosmetics, 100 lb. and over. Int. prepaid or old. | lb. | .50 |
| Blue, FD&C, No. 1. | lb. | 21.20 |
| No. 2. | lb. | 29.15 |
| Green, FD&C, No. 3. | lb. | 49.50 |
| Red, FD&C, No. 3. | lb. | 24.00 |
| Yellow, FD&C, No. 5. | lb. | 7.45 |
| No. 6. | lb. | 6.45 |
| Dyes, coater, certified colors for drugs and cosmetics. 100-lb. lots divd. | lb. | 9.75 |
| Green, O&C, No. 5. | lb. | 36.50 |
| No. 9. | lb. | 42.80 |
| Red, D&C, No. 4. | lb. | 19.96 |
| No. 17. | lb. | 36.90 |
| No. 19. | lb. | 39.25 |
| No. 22. | lb. | 12.45 |
| No. 28. | lb. | 59.95 |
| No. 33. | lb. | 48.95 |
| Yellow, D&C, No. 7. | lb. | 21.00 |
| No. d. | lb. | 20.55 |
| No. 10. | lb. | 49.90 |
| No. 11. | lb. | 35.25 |
| Dyes, coater, for general use in cloth and paper dyeing (by Color In- dex Name), t.o.b. works | lb. | |
| A Blk 1 Blue black ex. conc. | lb. | 5.75 |
| Dyes, A Blk 8 Blue 2G. | lb. | 5.49 |
| A Bl 45 Alizarine Blu SAP 160%. | lb. | 10.85 |
| A Bl 80 Alizarine Br. Cy G. | lb. | 14.13 |
| A Bl 113 Navy 5R. | lb. | 9.55 |
| A Or 19 Gast 2G 333%. | lb. | 22.12 |
| A Or 7 11. | lb. | 3.72 |
| A Or 6 RO Ex. Conc. | lb. | 4.00 |
| A Or 10 Wool Or 0. | lb. | 4.30 |
| A Or 74 Metallized Or GNA | lb. | B.15 |
| A R 20. | lb. | 5.13 |
| A R 14 Azo Rubine 133%. | lb. | 9.95 |
| A R 19 Scarlet 4R Conc. | lb. | 5.45 |
| A R 98 Fast Red A. Cone. | lb. | 9.85 |
| A R 151 Blk Red 36 Conc. | lb. | 4.50 |
| A V 17 SNSN Conc. | lb. | 9.75 |
| A V 49 BNS Conc. | lb. | 12.22 |
| A Y 17 Fast Light Yell 2G. | lb. | 5.90 |
| A Y 23 Tartrazine Ex Conc. | lb. | 9.18 |
| 9 Blg Zinc Free. | lb. | 16.40 |
| B Br 4 Blemark Brown R Ex. Conc. | lb. | 4.42 |
| 6 0 1 Jade Crystals. | lb. | 9.55 |
| 8 Gr 4 Malachite Green Crystal. | lb. | 6.80 |
| 6 V 1 Methyl Violet Crystals. | lb. | 6.80 |
| 6 V 10 Rhodamine B. Elk. | lb. | 10.95 |
| 8 Y 2 Bond Yell SFA 150%. | lb. | 10.10 |
| 0 6 1 Sky Blue 6B Cone. | lb. | 4.02 |
| Ex. Conc. 300%. | lb. | 9.26 |
| 0 Bl 6 Azurine 0 Cond. | lb. | 9.46 |
| 0 Bl 22 Fast Black GR. | lb. | 2.65 |
| Fast Black GR 150%. | lb. | 4.26 |
| 0 Br 230 Resin Fast 6 Brown 6RN 200%. | lb. | 7.23 |
| 0 Or 26 Resin Fast 0 Green GL. | lb. | 6.15 |
| 0 R 246 Ex. Conc. | lb. | 7.98 |
| 0 R 31 Brillant-Red 12B Cond. | lb. | 6.19 |
| 0 R 80 Fast Red 9BLN. | lb. | 6.15 |
| 0 R 91 Paper Red 96LP. | lb. | 6.85 |
| 0 R 251 Fast Scarlet AV. | lb. | 9.26 |
| 0 Dr 102 Fast Orange W3P Lq. | lb. | 2.47 |
| WS. Conc. 150%. | lb. | 11.25 |
| 0 Y 4 Brillant Paper Yell 3GX 125%. | lb. | 4.69 |
| Brilliant Paper Yell 3GX Lq. | lb. | 1.75 |
| 0 Y 11 Sulbene Yellow GA. Ex. Cond. | lb. | 3.03 |
| 0 Y 41 Fast Yellow ROL. Conc. 200%. | lb. | 6.75 |
| 0 Y 27 Resin Fast Yellow L5G. | lb. | 14.40 |
| 0 R 1 Scarlet BA. | lb. | 4.26 |
| 0 R 91 Pink REL 200%. | lb. | 21.00 |
| Dia Y 3 Yellow 0. | lb. | 3.88 |
| Dia Y 54 Yellow 3G. | lb. | 6.64 |
| Dia Or 3 Orange GRA. | lb. | 4.61 |
| Dia Or 37 Orange OB. | lb. | 3.77 |
| Dia V 1 4RN Paste. | lb. | 7.86 |
| Dia V 28 Bordeaux 6V 200%. | lb. | 17.26 |
| Dia 61 27 Blue BGLF. | lb. | 10.05 |
| Dia 61 102 Blue GFDA 300% 50% Paste. | lb. | 22.80 |
| V 0 1 Jade Green Double Paste. | lb. | 4.10 |
| V Blk 25 Olive TA Paste. | lb. | 5.60 |

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|--|------|-------|------|
| Epinephrine base, syn., U.S.P., bof1o, 100-gran. lots..... | gram | .60 | - |
| Epoxy resin, liquid, bulk tanks, divd .. lb. | | 1.31 | 1.41 |
| Solfo, bgs., l.l. | lb. | 1.29½ | 1.33 |
| Epsom salt [see Magnesium sulfate]. | | | |
| Erythorbic acid, powd., gran., 100 lb. dms., l.l. or mixed l.l. t.o.b. works..... | lb. | 4.10 | 4.25 |
| Ester gum, gum-rosin type, dms., c.l., divd., III., Md., Ky., E. Stetson, Minneapolis, N.C., Ohio, St. Louis, St. Paul, Ve., W. Va. lb. | | .76 | - |
| Ester gum, wood-rosin type, dms., c.l., same basis..... | lb. | .43 | .46 |

| | | |
|---|-----|--------|
| Ferric sulfate, partly hydrated, 100-lb. | | |
| bgs., c.l., works, | ton | 141.00 |
| bulk, works, | ton | 117.00 |
| Ferric ammonium citrate, NF, brown, | | |
| green gran. 100 lb. dms., | | |
| 2,000 lb. min. l.o.b. shipping | lb. | 2.00 |
| pt. | lb. | |
| 2c. per pound surcharge for shipments W. of Denver | | |
| Ferric ammonium oxalate, fine gran., | | |
| 250-lb. dms., t.l., f.o.b. works, | | |
| E. | lb. | .42 |
| Ferric hydroxyethylenediamine- | | |
| acetic acid, Industrial grade, | | |
| sodium salt, soln., 4.5% Fe, | | |
| t.c., t.t., t.o.b. works | lb. | .55 |
| agricultural grade, sodium salt solu- | | |
| tion, 5% Fe, t.c., t. t. o.b. | | |
| works | lb. | .84 |
| Ferrous fluoroborate liq. conc., dms., t.l., | | |
| works, frt. equal. | lb. | .84 |
| Ferrous gluconate, NF, 11, works E.l.b. | | 2.25 |
| Ferrous naphthonate, liq., 6% Fe, | | |
| dms., divd. | lb. | 1.17 |
| Ferrous sulfate, moist, bulk, t.l. f.o.b. | | |
| works | ton | 30.00 |
| heptahydrate, green, bulk, t.l. f.o.b. | | |
| works | ton | 145.00 |
| monohydrate, gran., bulk, t.l. f.o.b. | | |
| works | ton | 170.00 |
| UBP, powd., 400-lb. dms. | lb. | .49 |
| cryst., 250-lb. dms. | lb. | .81 |
| Fir oil, Canada dms. | lb. | 10.00 |
| Siberia, dms. | lb. | 12.75 |
| Fish oil, refd., alkali, tanks, c.l. | lb. | .28 |
| kettle-boiled, tanks | lb. | .32 |
| light, cold-pressed, dms., c.l. | lb. | .34 |
| tenke | lb. | .28 |
| Fishmeal, dom., menhaden, 80% protein grd., bulk, f.o.b. Atlan- | | |
| tic port | ton | 295.00 |
| t.o.b. Gulf port | ton | 290.00 |
| Imp., Chilean, 95% protein min., bulk, c.l., t.l., ex whse., f.o.b. Atlantic and Gulf ports | ton | 295.00 |
| Fluoboric acid, dms., t.l., works, frt. equal. | lb. | .7D |
| Fluorocarbon, No. 11 bulk, tanks, delvd. | lb. | .57 |
| No. 12, bulk, same basis | lb. | .66 |
| No. 22, bulk, same basis | lb. | 1.05 |
| No. 113, bulk, same basis | lb. | .99 |
| No. 114, bulk, same basis | lb. | 1.02 |
| Fluosilicic acid (see Hydrofluosilicic acid). | | |
| Formaldehyde, 37% methanol free (inhibited) divd., gulf | lb. | .088 |
| 44-45% (1% methanol) 14nke, divd. | lb. | .1015 |
| 37% (inhibited 7% methanol, divd. | lb. | .0945 |
| 37% (inhibited 11-15% methanol) tanks, divd. | lb. | .1055 |
| Formamide, tanks, f.o.b. | lb. | .39 |
| dns., same basis | lb. | .44 |
| Formic acid 80% tanks, f.o.b. works | lb. | .381/2 |
| 95% dns., c.l. works | lb. | .511/2 |
| Fructose, cryst., 18,000 kilos or more, dns. | lb. | .90 |
| Fumaric acid, food grade, bgs. t.l., frt. equal. E. | lb. | .751/2 |
| tech. grade, bgs. t.l., f.o.b. frt. equal. | lb. | |
| Furfural, tanks, f.o.b. Cedar Rapids, Iowa, and Belle Glade, Fla. lb. | | .75 |
| Furyl alcohol, tanks, f.o.b. Memphis, Tenn. and Omaha, Neb. | lb. | .72 |
| G | | |
| G salt, dns., frt. add. 100% basis | lb. | 2.30 |
| Oleic acid, 400-lb lots | lb. | 23.05 |
| Garlic oil, dns., Egyptian | lb. | 85.00 |
| Destatin, edible, 100 AOAC test, dns., t.l., divd. | lb. | 1.60 |
| 128 AOAC test, dns., t.l. | lb. | 1.75 |
| 160 AOAC test, dns., t.l. | lb. | 1.95 |
| 175 AOAC test, dns., t.l. | lb. | 1.95 |
| 200 AOAC test, dns., t.l. | lb. | 2.05 |
| 225 AOAC test, dns., t.l. | lb. | 2.10 |
| 260 AOAC test, dns., t.l. | lb. | 2.20 |
| 275 AOAC test, dns., t.l. | lb. | 2.30 |
| 300 AOAC test, dns., t.l. | lb. | 2.50 |
| Ogentan violet (see Methyl roseanniline chloride). | | |
| Geraniol, syn. 90-92%, dns. | lb. | 5.25 |
| nat., 90-92%, dns. | lb. | 3.60 |
| syn. 95-98%, dns. | lb. | 5.75 |
| Geranium oil, Moroccan | lb. | 24.00 |
| Bourbon | lb. | 33.00 |
| Chinese | lb. | 87.00 |
| Egypt | lb. | 85.00 |
| Turkish (see Palmarosa oil). | | |
| Geranyl acetate, dns. | lb. | 5.44 |
| nat., dns. | lb. | 10.95 |
| Geranyl formate, syn., dns. | lb. | 6.80 |
| nat., dns. | lb. | 16.95 |
| Glycerite: (g.p.) bulk, c.l., f.o.b. Bo- | | |
| nanza, Utah | ton | 80.00 |
| select, same basis | ton | 80.00 |
| Ginger, Cochin, bgs. | lb. | .63 |
| Chinese sliced | lb. | .58 |
| Ginger oil, Chinese | lb. | 39.00 |
| . Indian | lb. | 44.00 |
| Ginger oleoresin, NF, bgs. | lb. | 30.00 |
| Glucuronic acid (see Sodium sulfate). | | |
| Glucuronic acid tech. 50% dns., c.l., f.o.b. works | lb. | .50 |
| | | .44 |

CHEMICAL PRICES

WEEK ENDING OCT 3, 1988

| | | |
|------|--|------|
| | Glue, bone, extracted, green, jelly-grams, bgs., c.t. f.o.b. | .98 |
| .95 | 85 jellygrams, bgs., c.t. f.o.b. | .78 |
| | 115 jellygrams, bgs., c.t. f.o.b. | .77 |
| | 133 jellygrams, bgs., c.t. f.o.b. | .75 |
| | 194 jellygrams, bgs., c.t. f.o.b. | .87 |
| | 192 jellygrams, bgs., c.t. f.o.b. | .87 |
| | 220 jellygrams, bgs., c.t. f.o.b. | .93 |
| | Glue, hide, | |
| | 108 jellygrams, bgs., t.l. f.o.b. | .80 |
| | 135 jellygrams, bgs., t.l. f.o.b. | .89 |
| | 164 jellygrams, bgs., t.l. f.o.b. | .90 |
| | 192 jellygrams, bgs., t.l. f.o.b. | .95 |
| | 222 jellygrams, bgs., t.l. f.o.b. | 1.00 |
| | 251 jellygrams, bgs., t.l. f.o.b. | 1.02 |
| | 283 jellygrams, bgs., t.l. f.o.b. | 1.10 |
| | 315 jellygrams, bgs., t.l. f.o.b. | 1.15 |
| | 347 jellygrams, bgs., t.l. f.o.b. | 1.20 |
| | 378 jellygrams, bgs., t.l. f.o.b. | 1.25 |
| | 411 jellygrams, bgs., t.l. f.o.b. | 1.30 |
| | 444 jellygrams, bgs., t.l. f.o.b. | 1.35 |
| | 477 jellygrams, bgs., t.l. f.o.b. | 1.40 |
| 0.00 | Glutamic acid, 99.4% dms., 100-lb. lots, brt. std. | B.90 |
| 0.00 | Glycerine, natl. reid., USP, CP 99% tanks, divd. | .95 |
| | USP, CP, natl. 96%, tanks, divd. | .87 |
| | Syn. 96%, tanks divd. | .86 |
| | Syn. 99.5%, tanks divd. | .9 |
| | Glycine (see Aminoacetic acid). | |
| | Glyceryl guisulcate, 100-lb. fb. dms. f.o.b. | 14.5 |
| | Glycolic acid (see Hydroxyacetic acid) | |
| | Glyoxol 40% soln., bulk, tanks, divd. | .4 |
| | Grapefruit oil, Fla., dms. | 2.7 |
| | Calif., dms. | 2.2 |
| | Israel. | 2.2 |
| | Graphite, amorph, powd., bgs., dms., ex whse. | .1 |
| | cryst., B9-90%, powd., bgs., dms., ex whse. | .3 |
| | Graphite, cryst., 90-92%, powd., bgs., dms., ex whse. | .4 |
| | 95-96% powd., bgs., dms., ex whse. | .5 |
| | Graphite, amorph, cryst., 97% and up, powd., bgs., dms., ex whse. | .6 |
| | Graphite, like, No. 1, 80-95%, bgs., dms., ex whse. | .6 |
| | No. 2, 90-85%, bgs., dms., ex whse. | .6 |
| | Grease (See Oils, Fats & Waxes market report) | |
| | Grease oil (See Lard oil) | |
| | Gualecol, tech., 500-lb dms., 24,000lb. min., f.o.b. Wellington, Conn. | 2.7 |
| | NOTE: Purified grades are 10c higher | |
| | Gualecwood oil, dms. | 2.5 |
| | Ouar gum, edible, bgs., c.t., f.o.b. ship's pt. | .5 |
| 1.03 | Indust., bgs., high viscosity, c.t., same basis. | .5 |
| .77% | | |
| 82% | | |
| | H | |
| | Heliotrope, dms. | 6.0 |
| | Hemlock oil (see Spruce oil). | |
| | Henbane leaves, bgs. | .5 |
| | Heptane, Indust., tanks, f.o.b. Besse-mont, Tex. | 1.0 |
| | 65%, tanko, f.o.b. Houston, Tex. | 1.1 |
| | Heptanoic acid, syn., tanks, f.o.b. | .6 |
| | H-hexadecanol, syn., tanks, f.o.b. | .6 |
| | Hexahydrophthalic anhydride, tech. dms., t.t., f.o.b. works | 1.4 |
| | Hexamethylenetetramine, gran. bgs., o.t., t.t. works | .6 |
| | gran. dms., c.t., t.t. works | .6 |
| | pdf. bgs., o.t., t.t. works | .6 |
| | powd. dms., o.t., t.t. works | .6 |
| | Hexane, Indust., tanks, works | 1.0 |
| | 85%, tanks, f.o.b. Houston, Tex. | 1. |
| | Hexanol, syn., tanks, f.o.b. | .6 |
| | Hexyl alcohol, mixed isomeric, tanks. | .6 |
| | p-Hexyl methacrylate, dms., c.t., works. | .6 |
| | Hexylene glycol, tanks, divd. | .6 |
| | Hexyresorcinol, USP, dms., 25-lb. lots or more, brt. std. | 30.0 |
| | Homatropine hydrobromide, USP, 10-100-oz. lots/bts. | 10.0 |
| | Homatropine methylbromide, USP, 10-250 oz. lots/bts. | 9.0 |
| | Horseshoe herb, bgs. | .6 |
| | Hydrazine hydrate, 68%, t.t. brt. std. | 1.0 |
| | 55-gal. dms., t.t. brt. std. | 1.0 |
| | Hydrochloric acid, purif., 47%-57%, 2-obj., f.o.b. Works. | 7.4 |
| | Hydroxybutyl alcohol, tech., solid, dms., o.t., t.t. zone 1; tanks, f.o.b. | 1.0 |
| | Hydroxymalic acid, 40% dms., o.t., f.o.b. | .6 |
| | Hydroxymethyl methyl methacrylate (see Methacrylic acid). | |

4

CHEMICAL PRICES

WEEK ENDING OCT 3, 1986

| | | |
|---|------------------|----------|
| chloroethylene, dry cleaning grade, drfr., tanks, dived. | .28½ | - |
| Indust. grade, consumer. tanks, divd. | .31 | - |
| peracid dms. | 2.55 | - |
| permanent red 2B, (red 48), calcium salts, dms., fr. std. | 5.25 | - |
| barium salts, same basis. | 5.26 | - |
| arubalsam, 1.o.b. | 3.25 | - |
| argen oil, Paraguay | 5.00 | - |
| astrolatum, USP, snow white, dms., c.l. refy | .375 | - |
| tanks, refy | .310 | - |
| USP, soft white, dms., c.l. refy. | .375 | - |
| tanks, refy | .310 | - |
| USP, lyly white, dms., c.l. refy. | .370 | - |
| tanks, refy | .305 | - |
| USP, cream, dms., c.l. refy | .365 | - |
| tanks, refy | .30 | - |
| USP, soft yelloww, dms., c.l. refy. | .360 | - |
| tanks, refy | .285 | - |
| USP, amber, dms., c.l. refy. | .345 | - |
| tanks, refy | .280 | - |
| Petroleum pitch (see Asphalt, petroleum). | | |
| Petroleum sulfonate, 60-82%, sulfonic cont., HMW, bulk works | .48½ | .49 |
| NMW, same basis | .49 | - |
| LMW, same basis | .49 | .49½ |
| Prices for 51% sulfonic content 2c per lb. lower on corre- sponding molecular wts. | | |
| Phenacetin USP, powd., 200-lb. dms., 1,000-lb. lots, dived. | 2.20 | - |
| 100-lb. dms., 1,000-lb. lots, dived. | 2.22 | 2.46 |
| <i>o</i> -Pheneketone, dms., c.l. t.o.b. | 2.00 | - |
| Phenobarbital, USP, dms., 500-kilo lots, t.o.b. works | 19.50 | - |
| Phenobarbital-sodium, NF, 500-kilo lots, t.o.b. works | 27.00 | - |
| Phenol, syn. tanks, frt. equaid. | .25 | .29 |
| <i>o</i> -Phenolsulfonf acid, 65% sol'n. dms., c.l. lab works | .84 | - |
| tanks, same basis | .58 | - |
| Phenothiazine, Indust. grade, 50-lb. bags, c.l. t.o.b. works | 2.33 | - |
| punt. grade, same basis | 2.69 | - |
| Phenyl acetate, dms., 100-lb. lots, works | 1.04 | - |
| Phenyleacetic acid, pure cryst., 25-lb. cns | 4.50 | - |
| di-Phenylsulfone, dms., 2S-kilo lots | 84.00 | - |
| 1-Phenyl-3-carboxy pyrazolone-5, dms 200-lb. lots, dived. | 3.45 | - |
| <i>m</i> -Phenylenediamine, cast, dms., c.l. t.o.b. works | 2.07 | - |
| <i>o</i> -Phenylenediamine, flaked, dms., t.o.b. works | 3.25 | - |
| <i>p</i> -Phenylenediamine, flaked, dms., t.o.b. works | 4.00 | - |
| Phenylephrine hydrochloride, USP 100-kilo lots or more | 175.00 | 185.00 |
| Phenylethyl acetate, dms. | 3.35 | - |
| 2-Phenylethyl alcohol, NF, dms. | 2.10 | 2.20 |
| <i>o</i> -Phenylethylamine, dms., 30,000 lbs. or more, frt. std. | 1.50 | - |
| Phenylethylphenyl acetate, 25-lb. cns. | 5.50 | 6.80 |
| Phenylglycolic acid (see Mandelic acid) | 3.50 | - |
| Phenylhydrazine, 99% min. dms. | 1.80 | - |
| 1-Phenyl-3-methyl-5-pyrazolons, dms., 250-lb. lots dived. | 1.35 | 2.00 |
| <i>o</i> -Phenylphenol, dms., t.o.b. works | 1.85 | - |
| <i>p</i> -Phenylphenol, bgs., t.o.b., 40,000 lbs. or more, works | 5.50 | 6.80 |
| Phenylpropanolamine hydrochloride, 100-kilo dm. | 24.00 | 26.00 |
| Phenylsuccinate, punt. cryst., dms., E. | 2.75 | - |
| tech. cryst., E. | 2.25 | - |
| Phloxine toner (red 80), dms., frt. std. | 2.35 | - |
| Phosgene, 1-ton ret. cyls., 5 to 9-cyl. quantities, works | 1.95 | 2.05 |
| Phosphate rock, Fla., land pebble, run of mine washed, 56-88% ^o B.P. bulk c.l. mines | 23.1S | - |
| vessel, Tampa, same basis | 28.00 | - |
| Phosphoric acid, com'l. end tech. grades, 75% tanks, works | 29.00 | - |
| 80%-tanks, works | 31.00 | - |
| 85% N.F. tanks, 1.o.b. freight equival. | 33.50 | - |
| Foodgrade prices \$2.00 above tech. grade. | | |
| Phosphoric acid, agricultural grade, 52-54% a.p.e., 1 tanks, works | 3.10 | - |
| super, min. 70% a.p.e., same basis | 3.45 | - |
| Phosphorus, white (yellow) solid dms., c.l. works, frt. equaid. | 1.00 | - |
| tanks, works to b. works | .91 | - |
| Phosphorus oxychloride, tanks, frt. equaid | .40 | - |
| Phosphorus pentasulfide, powd., dms. c.l. works | 50.00 | - |
| total bns. 50cts. | 45.00 | - |
| Phosphorus pentoxide, dms. t.o.b. works | .82 | - |
| Phosphorus sesquioxide, dms., c.l., c.l. works | .38 | - |
| Phosphorus trichloride, dms. c.l. works | .40 | - |
| tanks, works | .35 | - |
| Phthalanhydride, bkg., c.l. t.o.b., dms., frt. equaid. | .30 | - |
| molten, tanks, same basis | .27 | - |
| Prices t.o.b. per higher on the West Coast | .65 | - |
| Phthalimide, bks., works | .810 | 8.50 |
| Phthalocyanine blue toner, red shade, bgs., In. std. E. of Rockies | 6.40 | 8.50 |
| green shade, same basis | 8.20 | 8.75 |
| Phthalocyanine blue toner, red shade, bb's, same basis | | |
| sia, 1.o.b. Charlotte, N.C. lb. | | 5.00 |
| Pigment green 8, kgs. | | 2.20 |
| Pilocarpine hydrochloride, USP, dms. | | 1.500.00 |
| Pimento see Allspice | | 2.40 |
| Pimento leaf oil, dms. | | 14.50 |
| Pine oil, 80% min. alcohol content, bulk, f.o.b. works | 100 lbs | 47.00 |
| dms., c.l. t.o.b. | same | 51.00 |
| basis | 100 lbs | 51.00 |
| a-Pinene, perfume grade | kilo | 1.82 |
| tech. grade | lb. | .18 |
| b-Pinene, perfumery grade, tanks | kilo | 2.30 |
| tech. grade, tanks | lb. | .35 |
| Piperazine, anhyd., dms., t.o.b. std. E. | | 1.80 |
| Piperazine chlrs, 36%, dms., 1,100- lb. lots, frt. std. | lb. | 2.25 |
| Piperazine dihydrochloride, 53% dms., t.o.b. std. | lb. | 2.00 |
| Piperazine hexahydrate, 44%, dms., t.100-lb. lots, frt. std. | lb. | 1.80 |
| Piperazine phosphate, 42%, dms., t.o.b. frt. std. | lb. | 1.80 |
| Piperidine diol, 88% min. dms., c.l. t.o.b. works | | 8.82 |
| Piperonyl butoxide dms., dived. | E. b. | 5.00 |
| Platinum, metal, works | Troy oz. | 802.00 |
| Polycarbonate resin, pellets, nat. t.o.b. frt. std. | lb. | 1.84 |
| Polyester resin, unsaturated, g.p., or- thophthalic, bulk, tankcars, frt. std. | lb. | .51 |
| Isophthalic, same basis | lb. | .56 |
| Polyethylene resin, high-density, blow molding, g.p., hopper cars, frt. std. | lb. | .43 |
| Injection molding, g.p., hopper cars, frt. std. | lb. | .43 |
| extrusion, g.p., hopper cars, same basis | lb. | .47 |
| wire and cable, nat., hopper cars, same basis | lb. | .45 |
| wire and cable, black, same ba- sis | lb. | .55½ |
| Polyethylene resin, low-density, film fiber, hopper cars, frt. std. | lb. | .36 |
| clarity film, hopper cars, t.o.b. std. | lb. | .37 |
| padet shrink film, hopper cars, same basis | lb. | .36 |
| extrusion coating, hopper cars, same basis | lb. | .36 |
| g.p., hopper cars, same basis | lb. | .36 |
| Polyethylene linear low-density g.p. resin | | .36 |
| blown film resin | | .40 |
| cast film resin | | .40 |
| Polyethylene resin, low-density inject- ion molding, g.p., hopper cars, same basis | lb. | .45 |
| line wire, CATV, power cable | lb. | .647 |
| wire and cable thermoplastic high- voltage, natural color, same basis | lb. | .70 |
| wire and cable, XLPE low voltage, 14% carbon black, same basis | lb. | .67½ |
| wire and cable jacketing, black lb. | | .587 |
| Polymyxinsulfate, USP, bulk, 50-billion units min. | .5 million units | .52 |
| Polyoxyethylene sorbitan monoso- ccharate, dms., 20,000-lb. lots, works | | .73 |
| Polyoxyethylene sorbitan trioleate, dms., 20,000-lb. lots, works | | .73 |
| Polypropylene resin, homopolymer, g.p., nat. t.o.b. frt. std. | lb. | .45 |
| copolymer, med. impact, nat., same basis | lb. | .50 |
| high impact, same basis | lb. | .53 |
| Colored material 6C. per lb. higher for each grade. | | |
| Polystryrene resin, cryst. nat., hopper cars, frt. std. | lb. | .46 |
| Impact, nat., hopper cars, same ba- sis | lb. | .51 |
| high heat, high impact, nat., hopper cars, same basis | lb. | .52 |
| expandable beads (EPS), pkng grade, 1,000-lb. lots | lb. | .86 |
| modified, same basis | lb. | .73 |
| Polyvinyl alcohol, fully hydrolyzed, medium viscosity, bgs., t.o.b. divd. | | 1.00 |
| partially hydrolyzed, medium viscos- ity, bgs., t.o.b. divd. | | 1.05 |
| Polyvinyl chloride resin, g.p., homo- polymer dispersion, bgs., t.o.b. divd. | | .50 |
| g.p. suspension, bulk, same ba- sis | lb. | .36 |
| pipe grds., bulk, same basis | lb. | .41 |
| film grds., bulk, same basis | lb. | .31 |
| Polyvinyl chloride, g.p., copolymer dis- persion, same basis | lb. | .50 |
| 8 P. copolymer suspension, same basis | lb. | .44 |
| Poppyeed, Dutch, bgs. | | .50 |
| Turkey, bgs. | | .50 |
| Potash agricultural (see Potassium muriate). | | |
| Potash, caustic, 1.o.b., 45% basis, tanks, works | 100 lbs. | 13.00 |
| West Coast, 50% basis, tanks, ex terminal | 100 lbs. | 18.00 |
| reg. lake, 88-92%, 400-lb. dms., c.l., works | 100 lbs. | 42.30 |
| Potassium acetate, NF, gran., dms., t.o.b. works | | .90 |
| Potassium bicarbonate, lech., gran., bgs., c.l. works | | .30 |
| Potassium bicarbonate, USP, gran., dms., t.o.b. | | .70 |

CHEMICAL PRICES

WEEK ENDING OCT 3, 1986

| | | |
|--|---------|---------|
| Rice bran oil, refined dms. L. | 1.25 | - |
| Ricinoleic acid (see Castor oil, epi). | | |
| Rechelle salt (see Potassium-sodium tartrate). | | |
| Roofing pitch (see Coal-tar pitch, roofing.) | | |
| Rose oil, nat., NF. Bulgarian, otto, bals. | 3880.00 | 3890.00 |
| Turkish, otto, bals. | 2250.00 | 3000.00 |
| Rosemary oil, NF, Spanish, dms., kilo | 9.00 | 11.00 |
| Tunisian, dms., kilo | 8.75 | 16.00 |
| Rotenone reeh, 30-45%, 100-lb. dms. works. | .21 | .23 |

| | | |
|--|--------|--------|
| Saccharin NF, gran., soluble, dms. 1,000-lb. lots, Int. std. | 2.50 | 2.75 |
| Saccharin NF, powd., soluble, dms. less than 20,000-lb. lots, Int. std., lb. | 3.75 | - |
| Safflower oil, non-break, tanks, N.Y., edible dms., N.Y., divd. | .50 | .53 |
| Sage leaves, Dalmatian, No. 1, bgs., lb. | .98 | 1.02 |
| Afghanian, bgs. | 1.95 | - |
| Turkish. | 1.65 | - |
| Sage oil, Clary, French, bals. | 1.25 | 1.30 |
| Dalmatian, crs. | 9.00 | - |
| Spanish, crs. | 6.50 | 10.00 |
| Salicylaldehyde, tanks, l.o.b. | 12.50 | - |
| Salicylamide, NF, gran., powd., dms., 2,000-lb. lots, one ship., lb. | 3.80 | - |
| Salicylic acid, tech., dms., c.i., t.t., works. | 1.07 | 1.10 |
| USP, cryst., dms., 1,000 lbs. or more. | 1.23 | 1.41 |
| USP, powd., dms., 1,000 lbs. or more. | 1.33 | 1.63 |
| Salt (see Phenylsulfonate). | | |
| Salt, evaporated, common, 50-lb. bgs., o.l., t.t., North, works. | 4.02 | - |
| bulk, same basis | 60.00 | 61.20 |
| ton chemical grade, same basis. | 4.30 | - |
| Salt, rock, medium, coarse, same basis. | 2.70 | - |
| bulk, same basis | 16.00 | 25.00 |
| Gallic acid, dem., bulk, works, 100% Na ₂ O, basis, l.o.b. works E ton same basis W | 65.00 | 68.00 |
| Sandalwood oil, E. Indian | 80.00 | 99.00 |
| Sarcosine, tech., tanks, works, trt. equal. | 145.00 | - |
| Schaaffer's salt, paste, dms., 100% basis, works. | 102.00 | - |
| Scopolamine hydrobromide, USP, 100-oz. lots bals. | 2.56 | - |
| Sebado acid, CP, bgs., c.i. works. | 38.00 | 46.50 |
| perf., bgs., c.i. works. | 1.85 | - |
| Seitz mixture, dms., 5,000-lb. lots, lb. | 1.84 | - |
| Selenium, powd., 98.69% Se, dms., divd. | 30% | - |
| cont., 98.5% Se, same basis. | 13.00 | - |
| Senna leaves, Alexandria, whole and half, bgs. | 10.00 | 15.00 |
| powd., bgs., bxs. | .76 | .80 |
| Sesame oil, USA, dms., i.c.i. works. | .70 | .71 |
| Sesame seed, Central American, hulled, bgs. | .90 | 1.10 |
| Senna pigment, burnt, paper bgs., i.c.i. works. | 1.00 | 1.20 |
| raw, paper bgs., i.c.i. works. | .50 | .61 |
| Silica, amorph., dry-grd., bgs., c.i. Works 93%, 200 mesh. | 31.00 | 32.60 |
| 98%, 200 mesh. | 32.00 | 33.50 |
| 93%, 67%, 326 mesh. | 34.50 | 35.50 |
| 98.5%, 326 mesh. | 37.00 | - |
| 98.5%, 326 mesh. | 51.50 | 64.50 |
| Sica, dry-grd., bgs., c.i. works, 99.9%, 400 mesh, micronized. | 72.00 | 75.50 |
| 98% under 1S microns, micronized. | 79.50 | 82.50 |
| 88% under 10 microns, micronized. | 104.00 | 105.00 |
| Silica, hard-quartz, 88.5% SiO ₂ , 32S mesh, bgs., c.i. works. | 37.00 | - |
| 140 mesh, bgs., c.i. works. | 34.75 | - |
| Silicon tetrachloride, tech., dms., c.i. works. | .50 | - |
| tanks, works. | .38 | - |
| Silver bullion, Ingots, cs., Troy, oz. | 5.715 | - |
| Silver cyanide, 50% Ag, 500-oz. lots, oz. | 4.656 | - |
| Silver nitrate, ACS, 58.2 Troy oz. Ag/100 avdp. oz. AgNO ₃ . | 3.415 | - |
| Soap bark, brushed, bgs. | 1.00 | - |
| Soda ash, dense, 68%, 100-lb. paper bgs., c.i. works, 1.0.b. bulk, c.i. same basis. | 120.00 | - |
| Light 68%, 100-lb. paper bgs., c.i. same basis. | 83.00 | - |
| bulk, c.i. same basis. | 150.00 | - |
| Soda, caustic, kg., 50% solvets, tanks, Gulf Coast works, l.o.b., frit. equal. | 123.00 | - |
| 73%, same basis. | 175.00 | 186.00 |
| Lake, 76%, 400-lb. dms., c.i. works. | 205.00 | 225.00 |
| ton, 78%, 400-lb. dms., c.i. works. | 500.00 | 670.00 |
| gran., 76%, 400-lb. dms., o.l. works. | 520.00 | 670.00 |
| beads, 78%, 400-lb. dms., o.l. works. | 520.00 | - |
| Prices for 1a, rayon-type, \$16 ton higher. Prices in West 70c. higher for sold, and \$20-\$30 ton higher for gran. and beads. | 27.50 | 28.50 |
| Soda, as, conc., bgs., c.i. works. | 3.35 | 3.65 |
| Sodium acetate, anhyd., bgs., o.l. o.b. works. | .54 | - |
| Sodium acetate, USP, 60% gran. 100-lb. dms., c.i. works. | .57 | - |
| Sodium alginate, NF, white, powd., dms., 300-lb. or more. | 8.00 | 6.75 |
| Sodium p-aminosalicylate, dms., 100-lb. lots or more, l.o.b. works. | 4.73 | - |
| Sodium amonite, bgs., o.l. divd. E. lb. kgs. | 1.46 | 1.50 |
| Sodium benzoate, tech., bgs., c.i., t.t., trt. ali. | .70% | - |
| Sodium benzoate, USP, 50-lb. bgs., c.i., t.t., same basis. | .83% | - |
| 100-lb. dms., c.i., t.t., same basis. | .86% | - |
| ton-ton, same basis. | .89 | - |

| | | |
|--|--------|--------|
| Sodium bicarbonate, USP, powd., reg. grade, bgs., c.i., t.t., works, fri. squeak. | 17.05 | - |
| coarse, same basis. | 18.05 | - |
| fine, same basis. | 17.20 | - |
| gran., same basis. | 17.65 | - |
| gran., fine, same basis. | 17.80 | - |
| Sodium bichromate, gran., bgs., c.i., t.t., works, fri. squeak. | .67 | - |
| 100-lb. bgs., c.i., same basis. | .78 | - |
| Sodium bisulfite, bulk, c.i. works, ton dms., c.i. | 175.00 | - |
| 100 lbs. | 13.00 | - |
| Sodium bisulfite, anhyd. bgs., c.i., t.t., works, East. | 28.60 | - |
| works, West. | 32.00 | - |
| Sodium bisulfite, edn., 38%, bulk, 100% basis, works, East. | 20.80 | - |
| solt, 100% bulk, works, West. | 20.00 | - |
| photographic grade, 43% soin. works. | 21.90 | - |
| Sodium borate NF, gran., bgs., c.i., t.t., works. | .51 | - |
| powd., same basis. | .62 | - |
| Sodium borohydride, powd., dms., 1000-5000-lb. works. | 16.88 | 21.80 |
| Sodium borohydrides, stabilized water soln., 12% NaBH ₄ , 100% basis, 3000 gal. tankwagen, works, lb. | 17.45 | - |
| Sodium bromide, 99%, gran. 400-lb. dms., 1.0.b. works. | 1.04 | - |
| Sodium carbonate, decahydrate, bgs., c.i., t.t., works. | 264.00 | - |
| Sodium carbonate, cryst. monohydrate (see Soda, ash) | | |
| Sodium carbonate, monohydrated, bgs., c.i., t.t., works. | 392.00 | - |
| Sodium carboxymethyl cellulose (see CMC.) | | |
| Sodium chlorate, bulk, t.c., t.t., delivered, N.E., ton | 315.00 | - |
| Sodium chloride, cryt. 450-lb. dms., c.i. works. | 335.00 | - |
| Sodium chloride, tech. (see Salt.) | | |
| Sodium chloride, USP, gran., bgs., c.i., t.t., works. | .26 | - |
| Sodium chloride, tech., cdm., c.i., t.t., works. | .17 | 1.27 |
| Sodium chromate, anhyd., dms., c.i., t.t., works. | .87 | - |
| Sodium chromate, tetrahydrate, bgs., c.i., t.t., works. | .84 | - |
| Sodium citrate, gran., anhyd., 200-lb. dms., c.i., t.t., N.Y., lb. | 1.85 | - |
| Sodium citrate, USP, gran., dihydrate, 100-lb. bgs., t.t., 1.0.b. shipping point. | .74½ | - |
| Sodium cyanate, dms., 1,000-lb. lots, works. | .85 | - |
| Sodium cyanide, brquiated or gran. 89% min., 200-lb. dms., min. 1.0.b. works. | .68 | - |
| Sodium dicetate, anhyd., dms., c.i., t.t., works. | .68 | - |
| Sodium diacetate, FCC, 60-lb. bgs., t.t., divd. E. of Rockies. | .81 | .87 |
| Sodium diacetate, tech., 50-lb. dms., c.i. works. | .52 | - |
| Sodium erythorbate, powd., gran., t.t. or mixed t.t., 1.0.b. shipping point. | .28 | 2.85 |
| Prices W. of Denver 2c. per pound higher. | | |
| Sodium ethoxycyanide, bgs., c.i. works. | .60 | - |
| Sodium fluoroboroate, tech., gran., dms., t.t. works. | 1.77 | - |
| Sodium fluoride, white, 97%, 400-lb. dms., c.i. works, int. squeak. | .8345 | - |
| 100 bgs., c.i., same basis. | .80 | - |
| USP powd., 200-lb. dms., t.t., 1.0.b. shipping point. | 4.89 | - |
| Sodium formate, bgs., c.i. works. | .20 | - |
| Sodium glucosinate, tech., 50-lb. bgs., 2,500 lbs. or more fri. std. | .80 | - |
| Sodium hydride, oil dispersion, 60% NaH, 187-lb. dms., 10 dms., works. | 1.88 | - |
| Sodium hydrosulfide (see Sodium sulfhydride.) | | |
| Sodium hydrosulfite, dms., c.i., t.t., 1.0.b. shipping point E. | .54 | - |
| Sodium hydroxide, USP, pellets, 100-lb. dms., c.i., t.t., works, fri. squeak. | .85 | .98 |
| Sodium hydroxide, tech. (see Soda, caustic.) | | |
| Sodium hypophosphate, EN grade, 300 lb. dms. 1.0.b. works. | 1.425 | 1.50 |
| 110 b. dms., c.i. works. | 1.47 | 1.52 |
| Sodium hyposulfite (see Sodium thiosulfate.) | | |
| Sodium iodide, USP, cryt., 300- to 500-lb. lots, dms. fri. squeak. | 14.72 | - |
| Sodium lauryl sulfate, 30%, tanks, t.o.b. works. | .29 | .32 |
| Sodium lignin sulfonate, bgs., c.i. works. | 25.60 | - |
| Sodium metabisulfite (see Sodium bisulfite.) | | |
| Sodium metaborate, octahydrate, gran., bgs., c.i. works. | .38 | - |
| tetrahydrate, gran., bgs., c.i. works. | .49 | - |
| Bodium, metallic, 12-lb. bricks, dms., c.i. works. | .93 | - |
| fused, dms., 24,000-lb. lots or more, works. | .87 | - |
| tanks, works. | .70 | .80 |
| Sodium metaphosphate, tech. bgs., c.i., t.t., 1.0.b. shipping pt. fri. squeak. | 61.60 | - |
| 100 lbs. | 68.25 | - |
| Sodium metasilicate, anhyd., bgs., c.i. works. | 27.26 | - |
| bulk, c.i. works. | 26.30 | - |
| pentahydrate, bgs., c.i., t.t. 1.0.b. shipping point. | 16.85 | - |
| bulk, c.i. works. | 17.20 | - |
| Sodium molybdate, anhyd. 1.0.b. works, 100 lbs and over. | 4.87 | - |
| cryst., dms., t.t., same basis. | 4.12 | - |
| Sodium naphthalene, dms., c.i., t.t., 1.0.b. works. | 2.00 | - |
| Sodium Nitrate, USP, bgs., c.i., t.t., fri. squeak. | 34.50 | - |
| Sodium nitrate, dom., Industrial, bgs., c.i. works. | 284.00 | 292.00 |
| bulk, c.i. works. | 260.00 | - |
| Gulf wheal. | 205.00 | 216.00 |
| Imp. comt., 100-lb. bgs., c.i., At., or | | |
| bulk, c.i. works. | 182.00 | - |
| Imp., agricultur., bulk, c.i., same basis. | 140.00 | - |
| Sodium nitrite, USP, dms., o.l. works. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 320°-350°F, 50°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
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| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
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| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 60°F m.p., tanks. | | |
| New Jersey. | | |
| Houston. | | |
| Whole. | | |
| Solvent naphtha, | | |

CHEMICAL PRICES

WEEK ENDING OCT 3, 1986

CHEMICAL PROFILE ADIPIC ACID

OCTOBER 6, 1986

SUPPLY

| PRODUCER | CAPACITY* |
|---------------------------|-----------|
| Allied, Hopewell, Va. | 30 |
| DuPont, Orange, Tex. | 350 |
| DuPont, Victoria, Tex. | 700 |
| Monsanto, Pensacola, Fla. | 600 |
| Total | 1,680 |

*Millions of pounds annually. All producers, except Allied use cyclohexane feedstock and have captive requirements for nylon 66 manufacture. Allied uses phenol as a feedstock and sells its adipic acid on the merchant market. Profile last published 10/17/83; this revision, 10/6/86.

DEMAND

1985: 1.5 billion pounds; 1986: 1.68 billion pounds; 1987: 1.86 billion pounds.

GROWTH

Historical (1974-1986): Zero percent per year; future: 2 percent per year through 1990. (Adipic demand is highly cyclical. This year will see growth of 12 percent over last year. But moderate contraction in the years following will combine for an average five-year growth of 2 percent per year.)

PRICE

Historical (1952-1986): High, 57¢ per pound, bulk, f.o.b., frt. equal.; low, 18¢ per pound same basis. Current: 50¢ to 53¢ per pound, same basis.

USES

Total nylon 66, 87 percent (reactant for nylon 66 fibers, 77 percent; reactant for nylon 66 resins, 10 percent); polyurethane resins, 4 percent; plasticizers, 3 percent; miscellaneous including food and polyester resin uses, 2 percent; exports, 3 percent.

STRENGTH

Strong housing and automotive markets this year have boosted demand for nylon 66 by up to 15 percent. A weaker US dollar has enhanced trade opportunities in the Far East. Demand for the product there is expected to be up by 10 percent this year.

WEAKNESS

Adipic acid consumption is tied to highly cyclical sectors of the economy. Strong growth this year and next will be replaced by contraction in the following years. The price of adipic acid has fallen about 2 to 3 cents per pound on the merchant market in the last year in response to lower feedstock costs.

OUTLOOK

Adipic acid supplies will remain more than adequate through 1990. The current boom in nylon 66 demand should taper off by the end of 1987. The next strong upturn in demand is not expected until after 1990.

PLATFORM

The Trade Arena

The following remarks are excerpted from an address by W.H. Chire Siunions, formerly of the National Research Council of Canada before a joint meeting of Chemical Marketing Research Association and the chemical marketing and economics division of American Chemical Society in Newport Beach, Calif.

Chemical manufacturers and users in North America are being subjected to legal suits claiming very substantial damages through jury trials. This kind of legal action is either very rare or much less successful in Japan, but Japan is vulnerable in another way — their dependence on imports for their new materials, energy and a significant proportion of their food.

In either case, North American or Japanese, an ignorant or antagonistic public spells trouble if it can effectively hold back desirable scientific and technological advances. We can no longer leave support of science and technology by the public to accident.

The Japanese correctly place the responsibility where it belongs — on scientists and technologists and on the industry and governments which employ them. The Tsuruha Expo '85 Science Exhibition was held, among other things, to encourage the public, and in particular its younger members, to become more interested and knowledgeable in science and technology.

The emergence of the new, low cost, science and technology museums in the United States, such as the one on the waterfront at San Francisco, is another excellent sign of what is possible and what is being done.

The bottom line is surely twofold: firstly, that chemicals of all kinds will be easier to market the more the public understands and approves of them; and secondly, that the public needs more chemistry and better chemicals to improve its health and its quality of life. Can you sell one of these without selling the other? This leads to the trade situation across the Pacific.

The Marshall Plan of the United States after World War II showed how world prosperity could be greatly assisted by settling the terms of trade appropriately. The question today is whether it is possible to devise terms of trade under the present economic conditions which will create what Lee Iacocca calls a "win-win" for each participating nation.

The key lies in the resolution of the United States-Japan trade problems. The outcome of this struggle will determine whether the free world will enter a period of gradually expanding economic activity or one which will decline.

The difficulties are compounded by the almost diametric opposites of the cultures involved.

The agricultural situation is deteriorating to the point where efficient producers are being put out of business by continuing subsidization of less efficient producers because no one can solve the political problem involved.

involved, and the widely differing attitudes in which they give rise. If you are visiting Japan, for example, and something happens which you do not understand, you will interpret it in normal North American fashion. However, it may be wise to consider that the situation may be the diametric opposite of what you expect.

When negotiating, for another example, North Americans tend to go by what is said. However, Japanese persons understand each other perfectly well by what is not said, and can reach agreement amongst themselves from the silences in the discussion. This is difficult for most Westerners to adjust to. The problem is to accommodate possible cultural misunderstandings in addition to the economic and technological factors.

One area of concern is the tendency of governments to try to control negotiations for political reasons. Obviously both governments and industries want to define the area for negotiation, but if this process becomes too detailed, success may be imperiled. Can we increase the chances of success despite this likelihood? Yes, if we can devise means to get the problems to define themselves.

Suppose a Canadian negotiator wishes to increase meat exports to Japan. He immediately runs into a quota system, proposed meat prices, and an exclusive importer, the Livestock Promotion Corporation. He knows about these, but he is aware of all the implications and complications of the effects of changing this arrangement inside Japan?

There is a way in which he could find out, by describing the Japanese situation back to his colleagues. By doing this, he will discover the points which does not know or is uncertain about. His Japanese opposite number can act as a consultant in this process (it is presumably in Japanese interests for engineers to be much better informed about the realities of their system). It is quite possible that the real problems are political and require a quite different approach if any real change is to be made.

Conversely, if a Japanese negotiator is dealing with experts of fish from Canada, there are many factors to be taken into account — quality and freshness, the 200 million nations by other countries which affect Japan's ability to fish itself, problems in the Maritime provinces, etc. By adopting the same method of explaining the Canadian position to his colleagues, he can acquire a fuller understanding of the situation from the Canadian point of view. In both cases the chances of successful negotiation have been raised by introducing a small measure of cooperation.

The agricultural situation is deteriorating to the point where efficient producers are being put out of business by continuing subsidization of less efficient producers because no one can solve the political problem involved.

The difficulties are compounded by the almost diametric opposites of the cultures involved.

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The difficulties are compounded by the almost diametric opposites of the cultures involved.

JOB & PEOPLE

Air Products Names Manager, Director

Air Products and Chemicals Inc. has appointed Dr. Nance K. Dieclan manager of its Gardner cryogenics department and R. Bruce Dructor director of its international chemicals group.

Dr. Dieclan will be responsible for providing overall management direction to the engineering, manufacturing and sale of cryogenic containers on a worldwide basis.

Mr. Dructor will be responsible for strengthening the international presence of Air Products in the urethane and polymer markets.



Robert B. McDonald, who has been elected vice-president of engineering and special products at Great Lakes Chemical Corporation. He was previously vice-president of engineering.



N. Dieclan



R.B. Dructor

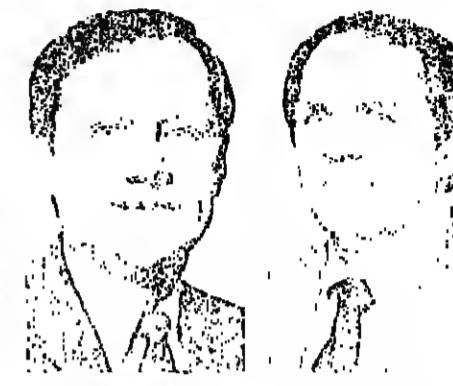
Chemicals Division of Eastman Chemical Products, Inc.

Pennwalt Appoints Two Organics Managers

Pennwalt Corporation has appointed F.H. Lauchert manager of marketing and sales and Nick E. Moran product line marketing manager, both in the Organic Chemicals Division.

Mr. Lauchert was previously sales manager for the Lycodol Division of Pennwalt.

Mr. Moran most recently served as sales representative for the organic chemicals division.



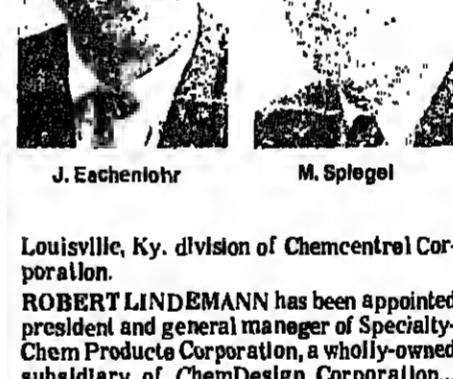
Lauchert on the sales staff at Florsynth, Inc... Salvatore G. Pastore has been named vice-president of National Distillers & Chemical Corporation and general manager of Suburban Propane.



JAMES C. MCCREADY has been named controller of Mobay Chemical Corporation's Inorganic Chemicals Division. DENNIS B. BROWN has been appointed controller of the company's Plastics & Rubber Division and DAVID C. WITHERS has been named controller of Mobay's Dyes, Pigments & Organics Division.



Louisville, Ky. division of Chemcentral Corporation.



J. Eichenlohr and M. Spiegel



J. Mooney and C. Corbett

BUSINESS BRIEFS

BASF Corporation's Chemicals Division has published a new brochure summarizing articles published here and abroad on the use of vitamins in cosmetics. The 68-page brochure, "Vitamins in Cosmetics 1987-1985," updated an earlier publication by the company covering the period 1987-1983. A free copy of the brochure is available upon request from BASF's Parispany, N.J. office.

Phloroglucinol (1,3,5-trihydroxybenzene) is an intermediate used by the pharmaceutical, dyeline printing, photographic and adhesive industries.

Reichhold Chemicals Inc. has introduced a new polyester resin for automotive sheet molding compound (SMC) applications.

The high-density PE containers are made by

Monsanto's proprietary extrusion process at plants in Deep River, Conn., and Logansport, Ind. The containers are designed for such products as shampoos, hair conditioners, skin lotions, liquid soaps, cosmetics, laxatives and car waxes. Monsanto says "Ultragloss" containers are less expensive than conventional high-gloss materials.

Verex Laboratories Inc., Englewood, Colo., has granted Cedona BV, a Dutch pharmaceutical company, the right to market "Verexamil" controlled-release tablets in Holland, Belgium and Luxembourg. "Verexamil" (verapamil) is a calcium channel blocker used for the treatment of high blood pressure and heart disease.

Shell Chemicals UK Limited plans to move its head office from London to Chester. About 200 staff from London and elsewhere will be involved in the move, which is expected to take place between late 1987 and early 1988.

The move will mean closer integration with Shell's manufacturing centers at Stanlow and Carrington.

October 6, 1986

JOB & PEOPLE

MEETINGS CALENDAR



October 6, 1986

THIS WEEK

AMERICAN OIL CHEMISTS SOCIETY, second world conference on detergents, Montreux, Switzerland, October 5-10.

SOCIETY OF THE PLASTICS INDUSTRY, plastics show and conference — South, jointly with the Society of Plastics Engineers, Georgia World Congress Center, Atlanta, Ga., October 8-10.

OCTOBER

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS & COLORISTS, international conference and exposition, Westin Peachtree Plaza Hotel, Atlanta, Ga., October 28-31.

AMERICAN MICROCHEMICAL SOCIETY, eastern analytical symposium, jointly with American Chemical Society and Society for Applied Spectroscopy, New York Hilton Hotel, New York, October 20-24.

ASSOCIATION OF THE NON-WOVEN FABRICS INDUSTRY, eighth international conference and exposition, Georgia World Congress Center, Atlanta, Ga., October 21-23.

1986

CHEMICAL GROUP, NATIONAL ASSOCIATION OF PURCHASING MANAGEMENT, Fall Conference, Marriott Pavilion Hotel, St. Louis, Mo., October 21-23.

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, seminar on aerosol technology, Remada Hotel, Ottawa, Ontario, Ill., October 27-29.

COMMERCIAL DEVELOPMENT ASSOCIATION, Impact of mergers and acquisitions on the future of technology-driven corporations, Hershey Hotel, Hershey, Pa., October 28-29.

DRUG, CHEMICAL & ALLIED TRADES ASSOCIATION, 96th annual meeting, The Breakers, Palm Beach, Fla., October 15-18.

EUROPEAN CHEMICAL MARKETING RESEARCH ASSOCIATION, 1986 conference, "The Chemical Industry Faces Its Future," Sofitel Eurotel, Antwerp, Belgium, October 13-15.

EUROPEAN PETROCHEMICAL ASSOCIATION, distributor meeting, Hotel Loews, Monza Carlo, Monaco, October 18-22.

FIRE RETARDANT CHEMICALS ASSOCIATION, Fall conference on proper processing and selection of flame retardants, Kiewit Island, S.C., October 19-22.

NATIONAL RENOVARBS ASSOCIATION, 53rd annual convention, Ritz-Carlton Hotel, Naples, Fla., October 14-16.

FERTILIZER ROUND TABLE, Sheraton Inner Harbor Hotel, Baltimore, Md., November 17-18.

NOVEMBER

AMERICAN PETROLEUM INSTITUTE, annual meeting, San Francisco, Calif., November 8-11.

CHEMICAL MARKETING RESEARCH ASSOCIATION, business school, personal computers in the workplace, Scantron Executive Conference Center, Princeton, N.J., November 8-7.

COSMETIC, TOILETRY & FRAGRANCE ASSOCIATION, 1986 scientific conference and exhibit, J.W. Marriot Hotel, Washington, D.C., November 2-6.

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, 73rd annual meeting, Marriott's Grand Beach Resort, Fort Lauderdale, Fla., December 7-11.

NATIONAL ASSOCIATION OF CHEMICAL DISTRIBUTORS, 15th annual meeting, Ritz-Carlton Hotel, Naples, Fla., December 2-6.

LATER ON

CHEM SHOW, 42nd exposition of the chemical industry, Jacob K. Javits Convention Center, New York City, New York, December 7-10.

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, 73rd annual meeting, Marriott's Grand Beach Resort, Fort Lauderdale, Fla., December 7-11.

NATIONAL ASSOCIATION OF CHEMICAL DISTRIBUTORS, 15th annual meeting, Ritz-Carlton Hotel, Naples, Fla., December 2-6.